

8K SERIES

SERVICE MANUAL



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1

GETTING STARTED

INTRODUCTION

The *8K Series Service Manual* contains essential information to help you maintain your 8K Series Lock.

CERTIFICATIONS AND STANDARDS

- The locks comply with ANSI A156.2, Series 4000 Grade 1 standards.
- The locks are listed by Underwriter's Laboratories for use on 3 Hr., A label single swinging doors.
- The chassis conforms to ANSI A115.2.
- The 8KS3 strike fits the standard door frame cutout as specified in ANSI A115.2.

DOCUMENTATION PACKAGE

The following documentation is available to help you with the installation, start-up, and maintenance of your 8K Series Lock.

The installation and assembly instructions also can be ordered separately:

Document Title	Doc. No.
<i>Installation Instructions for 8K Cylindrical Locks</i>	<i>T56066</i>
<i>8K "C, R, S, & T" Function Cam Positioning Instructions</i>	<i>T56068</i>
<i>8K H & HJ Function Key Instructions</i>	<i>T56070</i>
<i>8K "G" Function Cam Positioning Instructions</i>	<i>T56071</i>
<i>Wiring Instructions for 8K and 9K Series Electrified Cylindrical Locks with RQE</i>	<i>T56090</i>

The templates required for lock installations also can be ordered separately:

Document Title	Doc. No.
<i>K08 Template for Door and Frame Preparation for 63K, 73KC, 83K, 93K Cylindrical Locks with Small (STK) Strike</i>	<i>T56052</i>
<i>K09 Template for Door and Frame Preparation for 63K, 73KC, 83K, 93K Cylindrical Locks with Large (S3) Strike</i>	<i>T56053</i>
<i>K10 Template for Door and Frame Preparation for 64K, 84K, 94K Cylindrical Locks with Small (STK) Strike</i>	<i>T56054</i>
<i>K11 Template for Door and Frame Preparation for 64K, 84K, 94K Cylindrical Locks with Large (S3) Strike</i>	<i>T56055</i>
<i>K12 Template for Door Frame Preparation for 65K, 85K, 95K Cylindrical Locks with Small (STK) Strike</i>	<i>T56056</i>
<i>K13 Template for Door Frame Preparation for 65K, 85K, 95K Cylindrical Locks with Large (S3) Strike</i>	<i>T56057</i>
<i>K18 Template for Installation of 8K/9K Dummy Trim</i>	<i>T56059</i>
<i>K21 Template for Strike Specification for 6K, 8K, 9K Cylindrical Locks</i>	<i>T56060</i>
<i>Template for 3 3/4" & 5" Backset 6K, 8K, 9K Cylindrical Locks with RQE</i>	<i>T56077</i>
<i>Template for 2 3/4" Backset 6K, 7KC, 8K, 9K Cylindrical Locks with RQE</i>	<i>T56091</i>

TECHNICAL SUPPORT

Support services When you have a problem with the 8K Series Lock, your first resource for help is the *8K Series Service Manual*. If you cannot find a satisfactory answer, contact your local BEST Representative.

Telephone technical support A factory-trained Certified Product Specialist (CPS) is available in your area whenever you need help. Before you call, however, please make sure that the product is in your immediate vicinity, and that you are prepared to give the following information:

- what happened and what you were doing when the problem arose
- what you have done so far to correct the problem.

Best Access Systems Representatives provide telephone technical support for all 8K Series products. You may locate the representative nearest you by calling (317) 849-2250 Monday through Friday, between 7:00 a.m. and 4:00 p.m. eastern standard time; or visit the web site, www.BestAccess.com.

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FUNCTIONS AND PARTS LISTS

The following pages contain function descriptions for all 8K Series Locks. This chapter also includes exploded diagrams that show all field serviceable mechanical parts, diagrams of trim and other miscellaneous parts, and function conversion information.

For information about the DEU and DEL functions, see the *W Series Service Manual* (T60775).

FUNCTION DESCRIPTIONS

This section includes function descriptions grouped by the following function types:

- single-keyed (page 2-2)
- double-keyed (page 2-4)
- non-keyed (page 2-5)
- special (page 2-6)
- ANSI designation (page 2-8).

Note: If the function is ANSI defined, the ANSI designation appears by the function name.

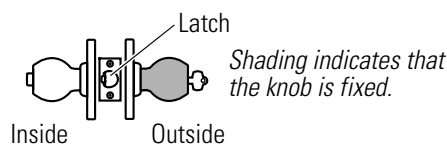
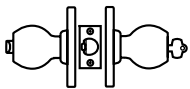


Figure 2.1 Understanding function drawings

Single-keyed functions

The following lists describe how the latchbolt, outside knob, and inside knob operate for each single-keyed 8K function.

AB—Entrance (ANSI F109)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when the inside button is in the unlocked position

Outside knob locked by:

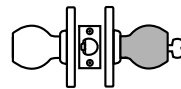
- inside button when pushed in
- inside button when pushed in and rotated clockwise

Outside knob unlocked by:

- inside knob when the inside button is pushed in but not rotated
- outside key when the inside button is pushed in but not rotated
- closing the door when the inside button is pushed in but not rotated

Inside knob is always unlocked

D—Storeroom (ANSI F86)



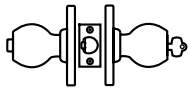
Latchbolt operated by:

- inside knob
- outside key

Outside knob is always fixed

Inside knob is always unlocked

E–Service station (ANSI F92)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when the inside button is in the unlocked position

Outside knob locked by:

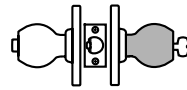
- inside slotted button
- inside slotted button when pushed in and rotated clockwise

Outside knob unlocked by:

- inside knob
- inside slotted button when rotated counterclockwise
- outside key
- closing the door when the inside button is pushed in but not rotated

Inside knob is always unlocked

H and HJ–Hotel guest room (ANSI F93 for H only)



Latchbolt operated by:

- inside knob
- outside key when the inside button is in the unlocked position
- special emergency key after the core is removed with the control key

Outside knob is always fixed

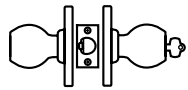
Key block feature released by:

- inside knob
- closing the door

Inside knob is always unlocked

Note: For the H function, pushing the inside button projects an “Occupied” indicator in the outside knob and blocks all operating keys. For the HJ function, pushing the inside button blocks all operating keys.

R–Classroom (ANSI F84)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when not locked

Outside knob locked by:

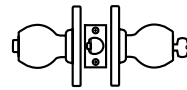
- outside key

Outside knob unlocked by:

- outside key

Inside knob is always unlocked

T–Dormitory (ANSI F90)



Latchbolt operated by:

- inside knob
- outside knob when not locked

Outside knob locked by:

- inside button

Outside knob unlocked by:

- inside knob when the inside button is pushed in
- outside key
- closing the door when the inside button is pushed in

Inside knob is always unlocked

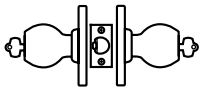
Double-keyed functions



The following lists describe how the latchbolt, outside knob, and inside knob operate for each double-keyed 8K function.

Locks that secure both sides of the door are controlled by building codes and the Life Safety Code[®]. In an emergency exit situation, failure to quickly unlock the door could be hazardous, or even fatal.

C—Apartment (ANSI F88)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when not locked

Outside knob locked by:

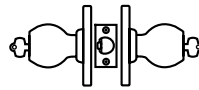
- inside key

Outside knob unlocked by:

- inside key

Inside knob is always unlocked

G—Storeroom (ANSI F91)



Latchbolt operated by:

- inside knob when not locked
- outside knob when not locked

Outside knob locked by:

- inside key
- outside key

Outside knob unlocked by:

- inside key
- outside key

Inside knob locked by:

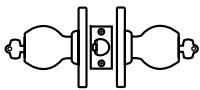
- inside key
- outside key

Inside knob unlocked by:

- inside key
- outside key

Note: Turning the key in either the inside or outside knob locks or unlocks both sides.

S—Communicating (ANSI F80)



Latchbolt operated by:

- inside key
- inside knob when not locked
- outside key
- outside knob when not locked

Outside knob locked by:

- outside key

Outside knob unlocked by:

- outside key

Inside knob locked by:

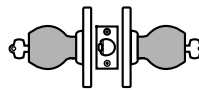
- inside key

Inside knob unlocked by:

- inside key

Note: Turning the key in either knob locks or unlocks that knob independently.

W—Institutional (ANSI F87)



Latchbolt operated by:

- inside key
- outside key

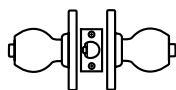
Outside knob is always fixed

Inside knob is always fixed

Non-keyed functions

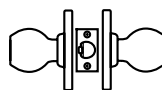
The following lists describe how the latchbolt, outside knob, and inside knob operate for each non-keyed 8K function.

L-Privacy (ANSI F76)



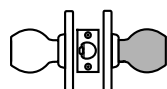
- Latchbolt operated by:
- inside knob
 - outside knob when the inside button is in the unlocked position
- Outside knob locked by:
- inside button
- Outside knob unlocked by:
- inside knob
 - outside slotted button when pushed in and rotated counterclockwise
 - closing the door
- Inside knob is always unlocked

N-Passage (ANSI F75)



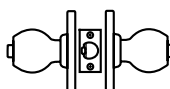
- Latchbolt operated by:
- inside knob
 - outside knob
- Outside knob is always unlocked
- Inside knob is always unlocked

NX-Exit (ANSI F89)



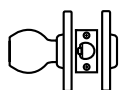
- Latchbolt operated by:
- inside knob
- Outside knob is always fixed
- Inside knob is always unlocked

P-Patio (ANSI F77)



- Latchbolt operated by:
- inside knob
 - outside knob when the inside button is in the unlocked position
- Outside knob locked by:
- inside button
- Outside knob unlocked by:
- inside knob
 - closing the door
- Inside knob is always unlocked

Y-Exit



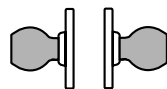
- Latchbolt operated by:
- inside knob
- Inside knob is always unlocked

1DT-Single dummy trim



This assembly is a single, surface mounted knob for an inactive door or a non-latching door. Single dummy trim can be installed on the inside or outside of the door.

2DT-Double dummy trim



This assembly is a through-bolt mounted pair of matching knobs for an inactive door or a non-latching door.

Special applications

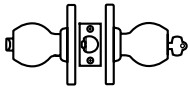


Warning!

The following lists describe how the latchbolt, outside knob, and inside knob operate for each special 8K function.

Locks that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly unlock the door could be hazardous, or even fatal.

A—Dormitory or storeroom lock (ANSI F81)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when the inside button is in the unlocked position

Outside knob locked by:

- inside button

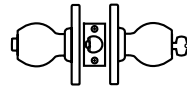
Outside knob unlocked by:

- inside button

Inside knob is always unlocked

Note: Inside button must be rotated counterclockwise to unlock the outside knob.

B—Office (ANSI F82)



Latchbolt operated by:

- inside knob
- outside key
- outside knob when the inside button is in the unlocked position

Outside knob locked by:

- inside button

Outside knob unlocked by:

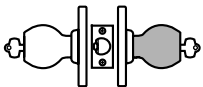
- inside knob

- outside key

Inside knob is always unlocked

Note: Inside button is released by turning the key in the outside knob or rotating the inside knob. Closing the door does not release the inside button.

⚡ DR—Special



Latchbolt operated by:

- inside key
- inside knob when not locked
- outside key

Outside knob is always fixed

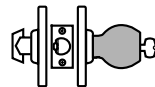
Inside knob locked by:

- inside key

Inside knob unlocked by:

- inside key

DZ—Closet or storeroom



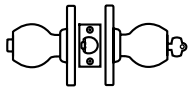
Latchbolt operated by:

- inside turn knob
- outside key

Outside knob is always fixed

Inside turn knob is always unlocked

EA—Entrance or Office



Latchbolt operated by:

- inside knob
- outside key
- outside knob when the inside button is in the unlocked position

Outside knob locked by:

- inside button
- inside button when pushed in and rotated clockwise

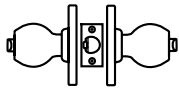
Outside knob unlocked by:

- inside knob
- inside button when rotated counterclockwise
- outside key

Inside knob is always unlocked

Note: Turning the slotted button keeps the outside knob locked until the button is turned back.

M—Communicating (ANSI F78)



Latchbolt operated by:

- inside knob when not locked
- outside knob when not locked

Outside knob locked by:

- inside button

Outside knob unlocked by:

- inside button

Inside knob locked by:

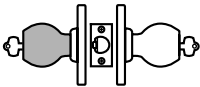
- outside button

Inside knob unlocked by:

- outside button

Note: Do not use this function for rooms that have no other entrance.

RD—Special



Latchbolt operated by:

- inside key
- outside key
- outside knob when not locked

Outside knob locked by:

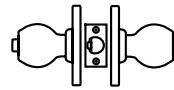
- outside key

Outside knob unlocked by:

- outside key

Inside knob is always fixed

LL—Hospital privacy



Latchbolt operated by:

- inside knob
- outside knob when not locked

Outside knob locked by:

- inside button when pushed in

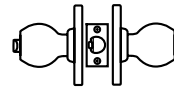
Outside knob unlocked by:

- inside knob
- outside button when pushed in and rotated counterclockwise

- closing the door

Inside knob is always unlocked

Q—Exit (ANSI F83)



Latchbolt operated by:

- inside knob
- outside knob when not locked

Outside knob locked by:

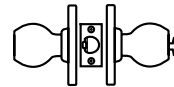
- inside button

Outside knob unlocked by:

- inside button

Inside knob is always unlocked

RH—Special



Latchbolt operated by:

- inside knob when latchbolt not locked in retracted position
- outside knob when not locked

Latchbolt held retracted by:

- locking outside knob when latchbolt in retracted position

Outside knob locked by:

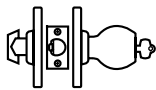
- outside key

Outside knob unlocked by:

- outside key

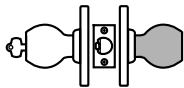
Inside knob is always unlocked

RZ–Closet or storeroom



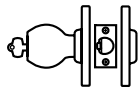
- Latchbolt operated by:
- inside turn knob
 - outside key
 - outside knob when not locked
- Outside knob locked by:
- outside key
- Outside knob unlocked by:
- outside key
- Inside turn knob is always unlocked

XR–Special



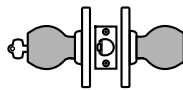
- Latchbolt operated by:
- inside key
 - inside knob when not locked
- Outside knob is always fixed
- Inside knob locked by:
- inside key
- Inside knob unlocked by:
- inside key

YR–Special



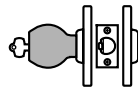
- Latchbolt operated by:
- inside key
 - inside knob when not locked
- Inside knob locked by:
- inside key
- Inside knob unlocked by:
- inside key

XD–Special



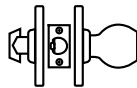
- Latchbolt operated by:
- inside key
- Outside knob is always fixed
- Inside knob is always fixed

YD–Exit



- Latchbolt operated by:
- inside key
- Inside knob is always fixed

Z–Closet latch



- Latchbolt operated by:
- inside turn knob
 - outside knob
- Outside knob is always unlocked
- Inside turn blade is always unlocked

**Functions
by ANSI
designation**

ANSI no.	Function
F75	N
F76	L
F77	P
F78	M
F80	S
F81	A
F82	B
F83	Q
F84	R

ANSI no.	Function
F86	D
F87	W
F88	C
F89	NX
F90	T
F91	G
F92	E
F93	H
F109	AB

STANDARD FUNCTIONS

AB FUNCTION CHASSIS—ENTRANCE LOCK (ANSI F109)

Item	Part No.	Qty.	Description
1	B54742	1	Turn button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed knob sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54860	1	Key release cam assembly
8	A54807	1	Keyed sleeve assembly
9	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

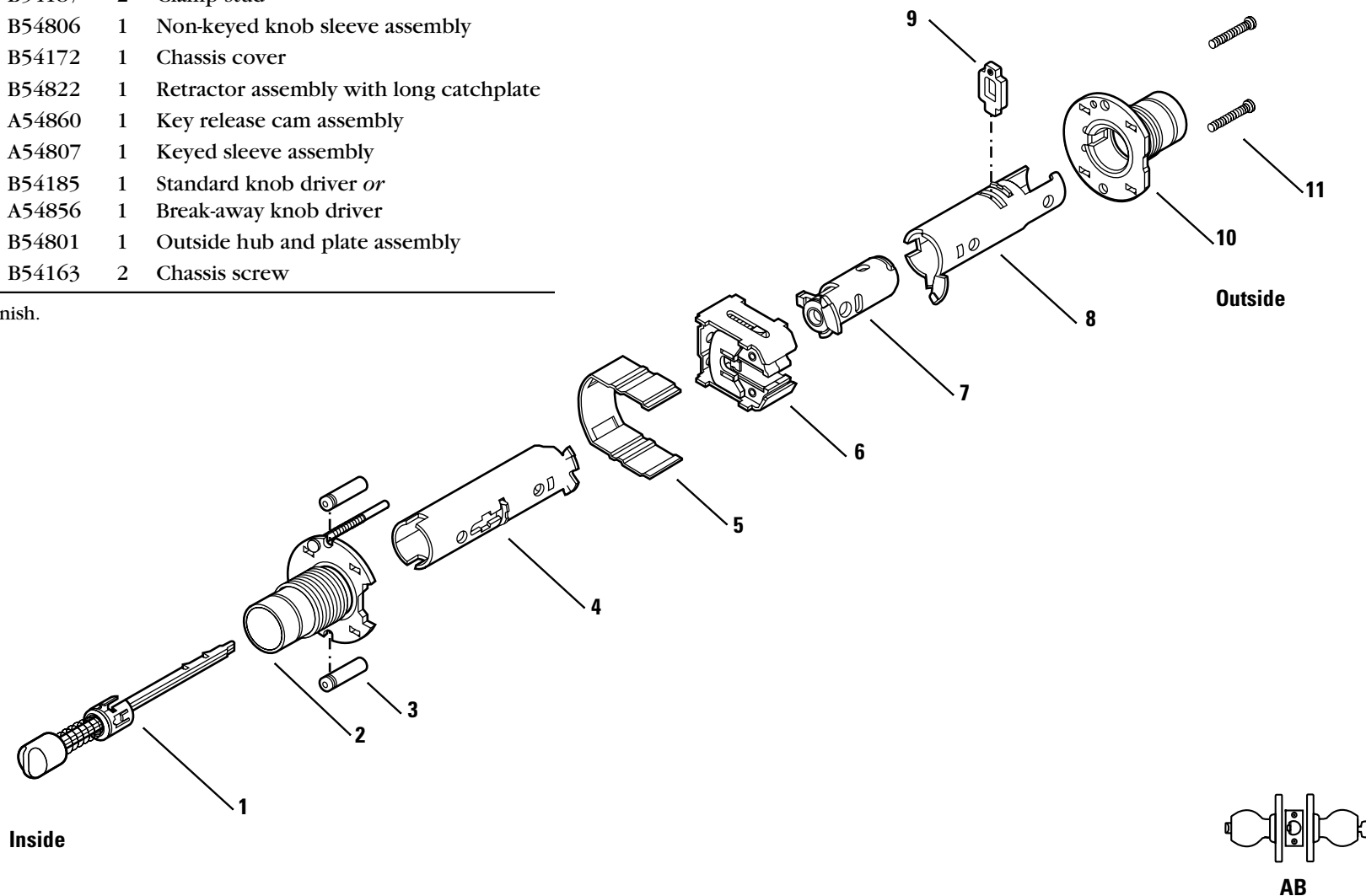


Figure 2.2 AB function exploded diagram

C FUNCTION CHASSIS—APARTMENT LOCK (ANSI F88)

Item	Part No.	Qty.	Description
1	A54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
5	A54863	1	Key release cam assembly
6	B54172	1	Chassis cover
7	A54190	1	Locking bar
8	B54820	1	Retractor assembly without catchplate
9	A54860	1	Key release cam assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

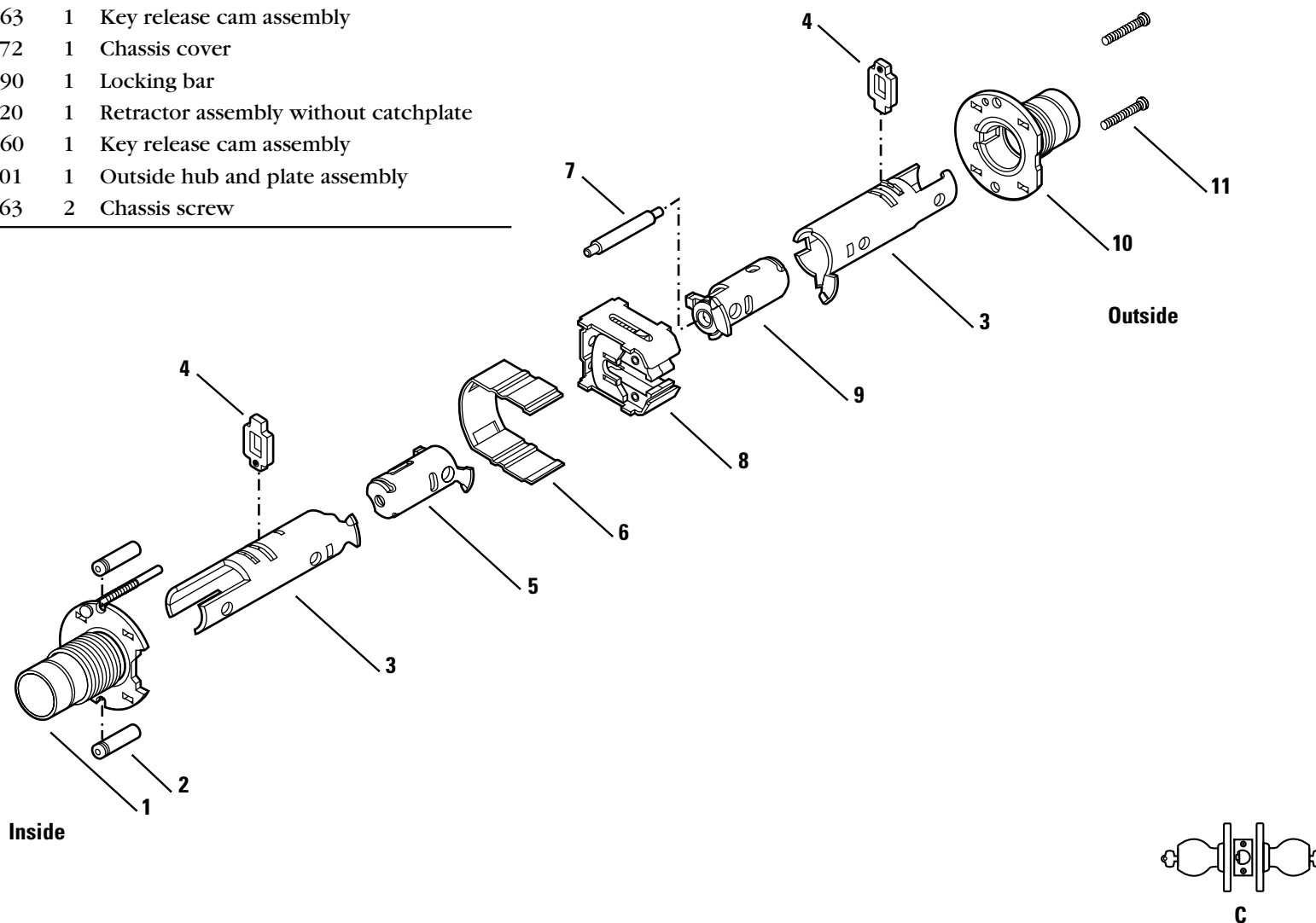


Figure 2.3 C function exploded diagram

D FUNCTION CHASSIS—STOREROOM LOCK (ANSI F86)

Item	Part No.	Qty.	Description
1	A54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54806	1	Non-keyed sleeve assembly
4	B54172	1	Chassis cover
5	B54820	1	Retractor assembly without catchplate
6	A54861	1	Key release cam assembly
7	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
8	B54807	1	Keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

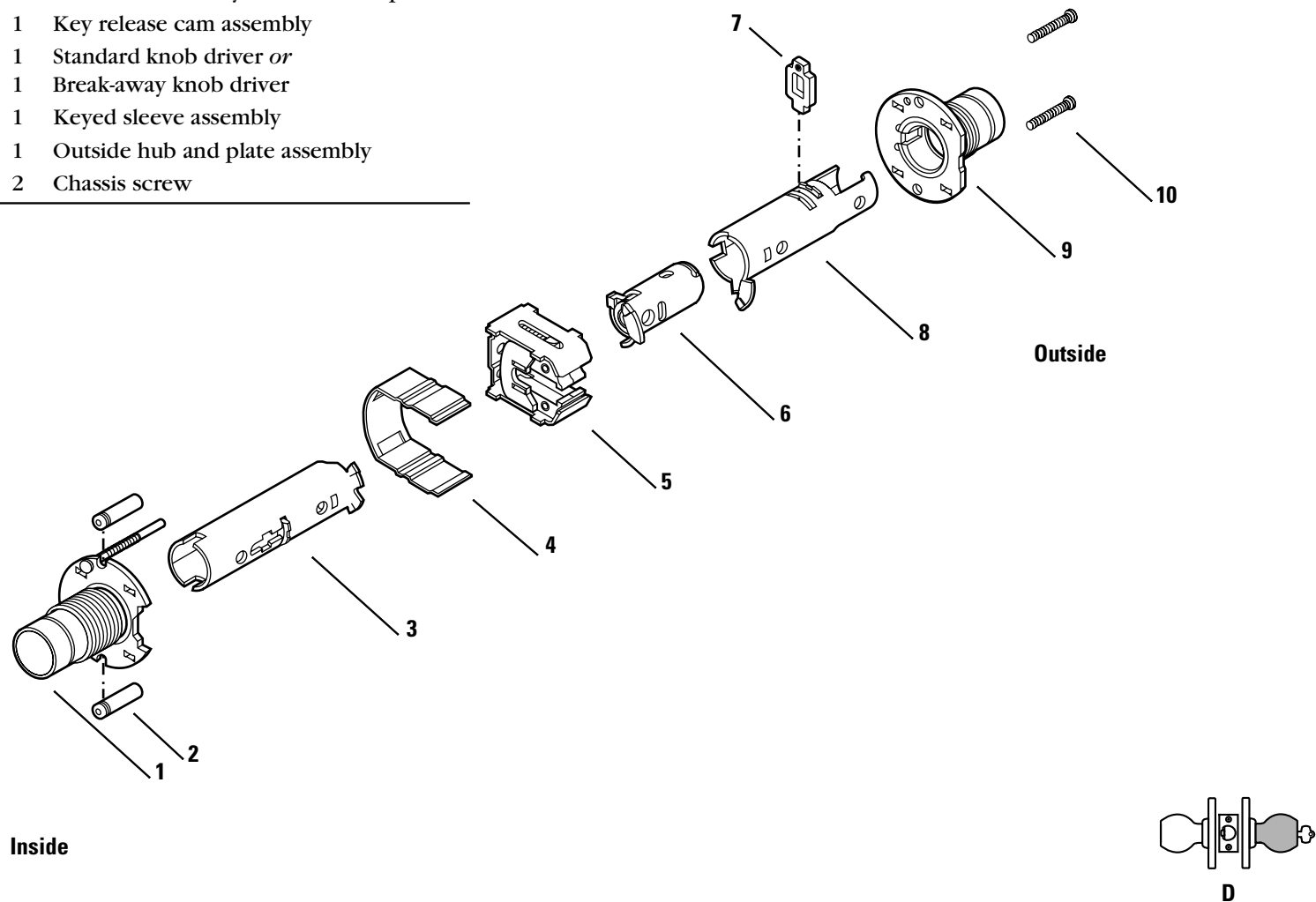


Figure 2.4 D function exploded diagram

E FUNCTION CHASSIS—SERVICE STATION LOCK (ANSI F92)

Item	Part No.	Qty.	Description
1	B54748	1	Slotted button assembly†
2	A54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54860	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

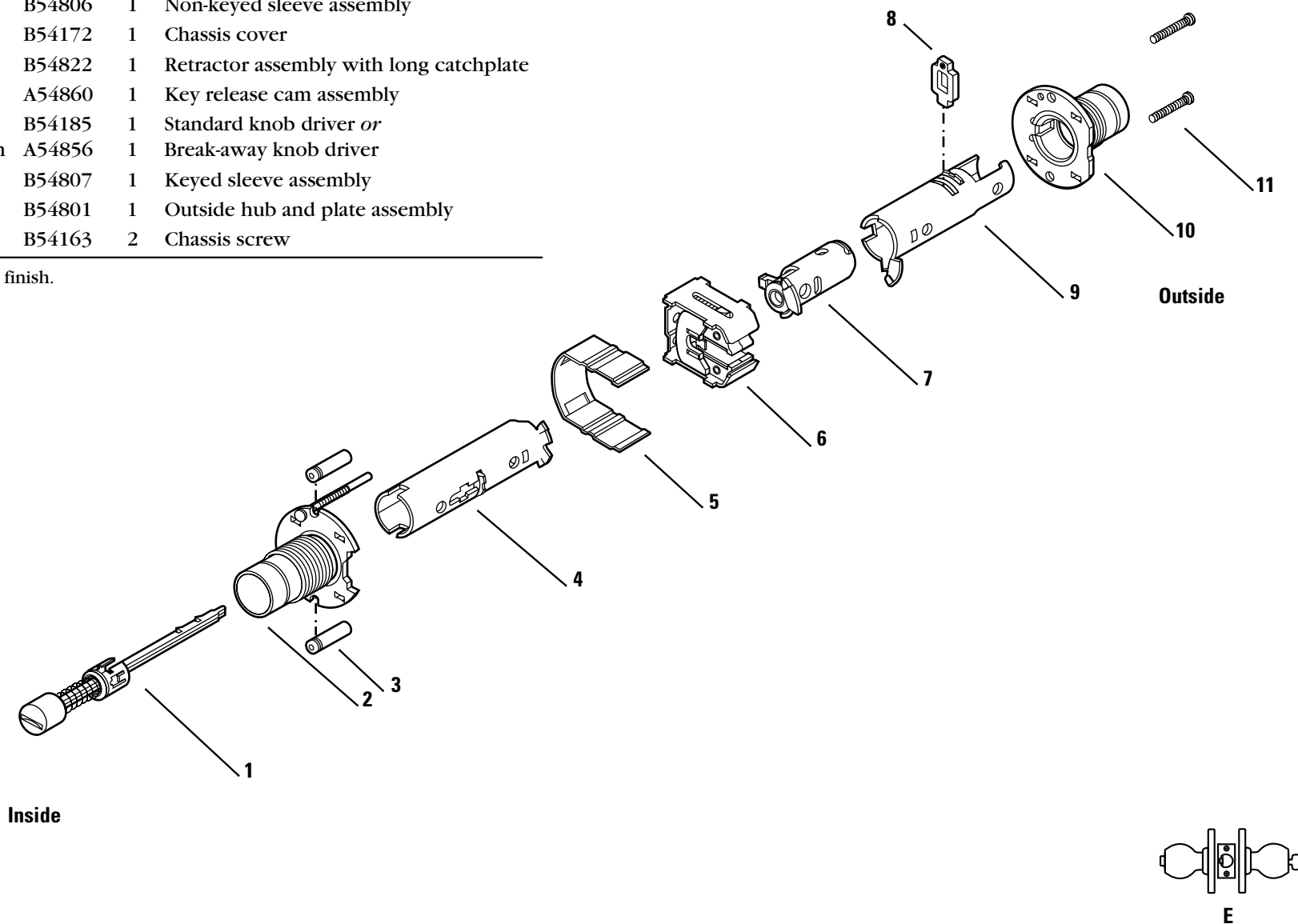


Figure 2.5 E function exploded diagram

G FUNCTION CHASSIS—STOREROOM LOCK (ANSI F91)

Item	Part No.	Qty.	Description
1	A54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
5	A54864	2	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	A54195	1	Locking bar
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

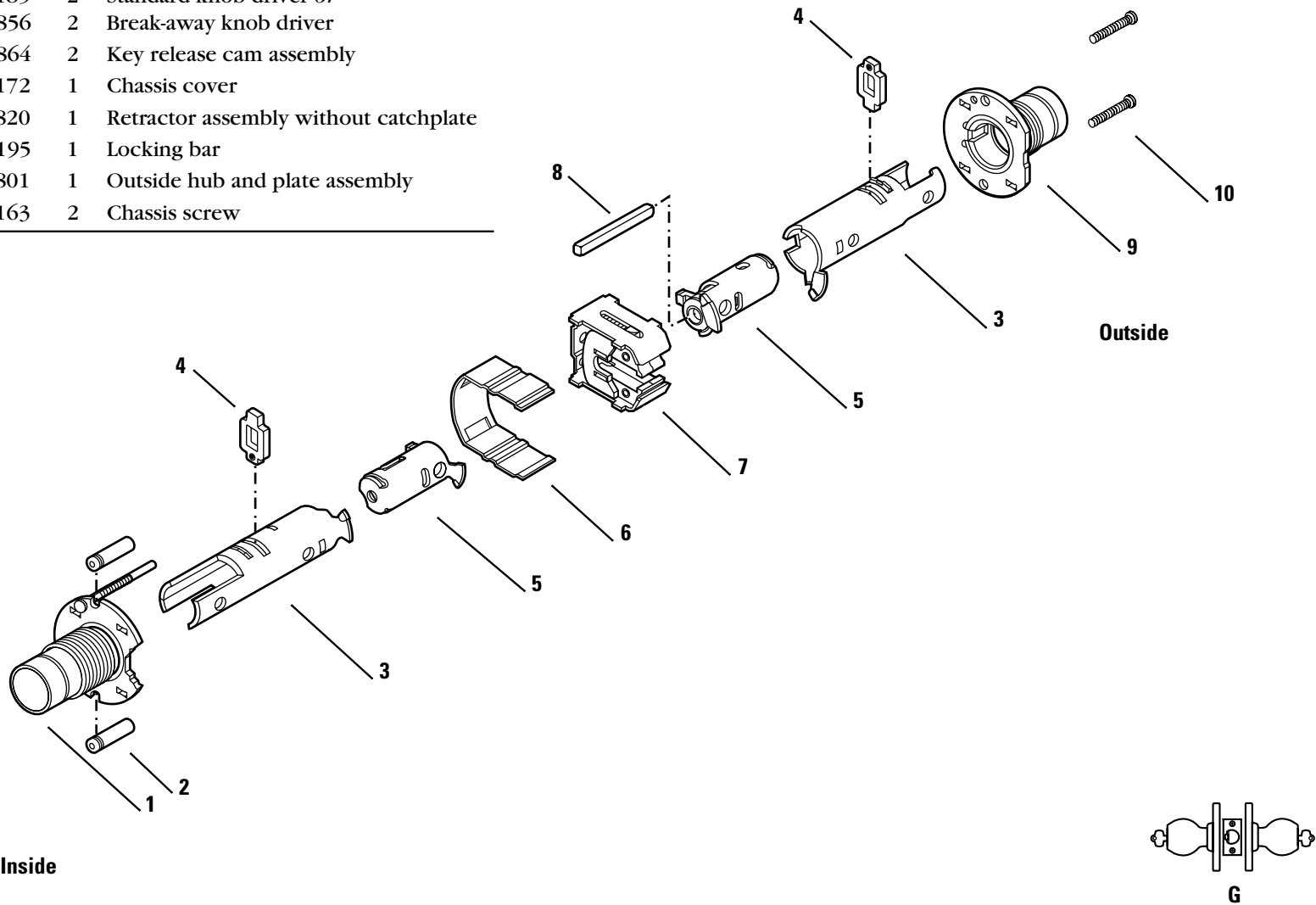


Figure 2.6 G function exploded diagram

H FUNCTION CHASSIS—HOTEL GUEST ROOM LOCK WITH INDICATOR (ANSI F93) **HJ FUNCTION CHASSIS—HOTEL GUEST ROOM LOCK WITHOUT INDICATOR**

Item [†]	Part No.	Qty.	Description
1	B54744	1	Push button assembly [‡]
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54865	1	Key release cam assembly
8	B54832	1	Keyed sleeve and hub assembly
9	B54163	2	Chassis screw

[†] These functions require special throw members. See [page 2-46](#).

[‡] Specify finish.

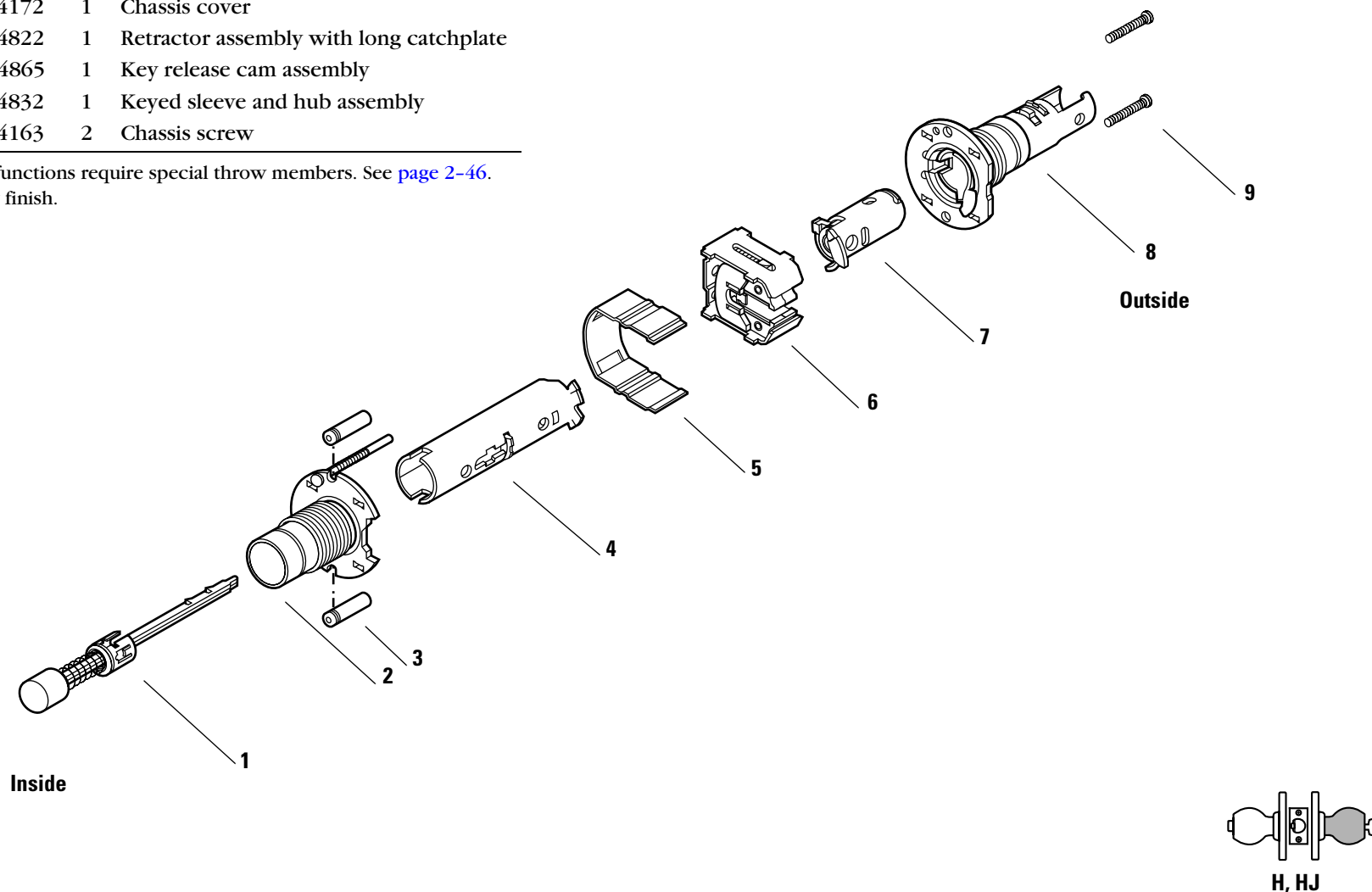


Figure 2.7 H/HJ function exploded diagram

L FUNCTION CHASSIS—PRIVACY LOCK (ANSI F76)

Item	Part No.	Qty.	Description
1	B54744	1	Push button assembly [†]
2	A54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54860	1	Key release cam assembly
8	B54808	1	Non-keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	A54745	1	Button release assembly [†]
11	A54163	2	Chassis screw

[†] Specify finish.

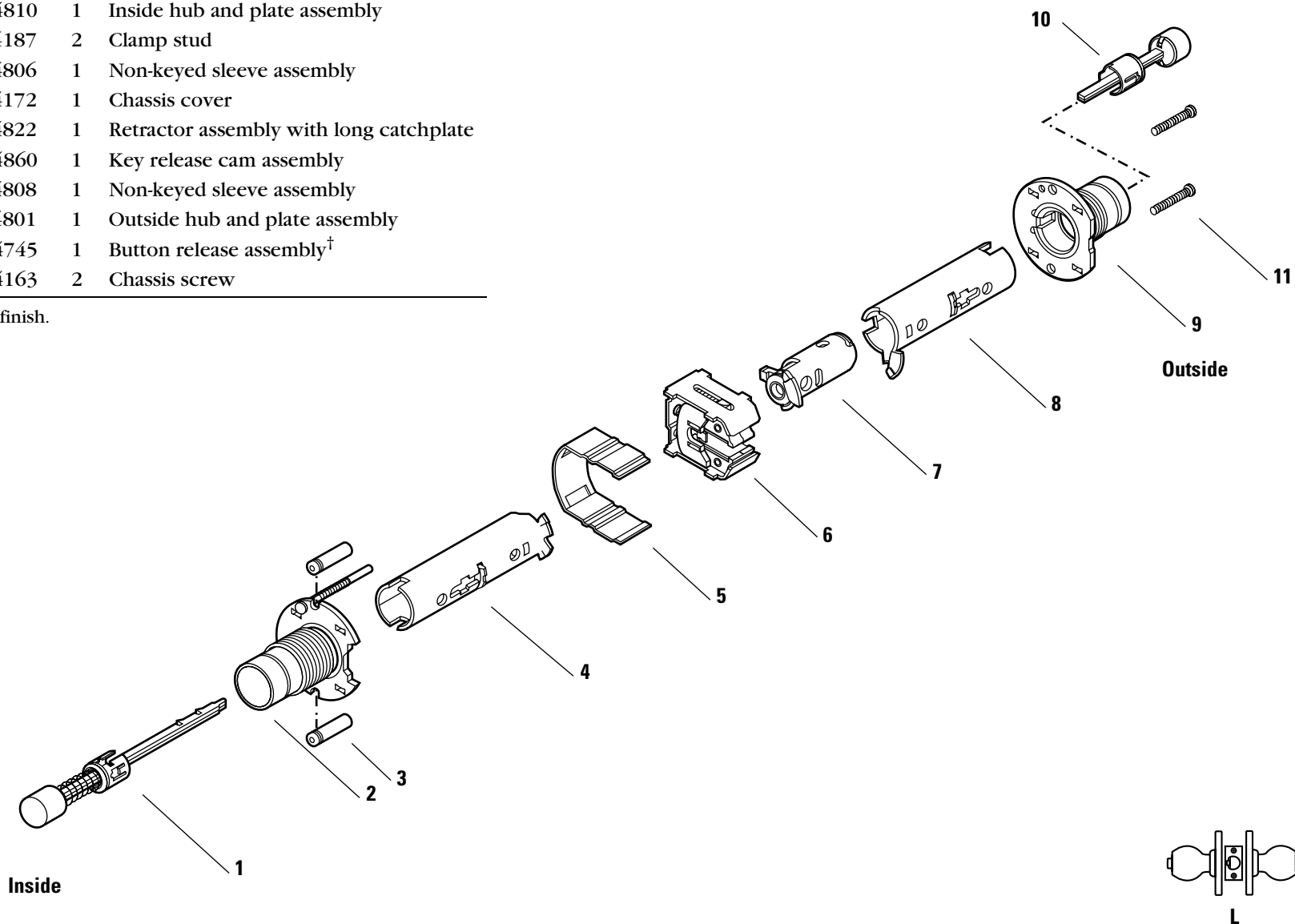


Figure 2.8 L function exploded diagram

N FUNCTION CHASSIS—PASSAGE LOCK (ANSI F75)

Item	Part No.	Qty.	Description
1	A54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54806	2	Non-keyed sleeve assembly
4	B54172	1	Chassis cover
5	B54820	1	Retractor assembly without catchplate
6	B54801	1	Outside hub and plate assembly
7	B54163	2	Chassis screw

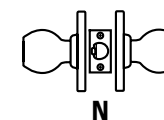
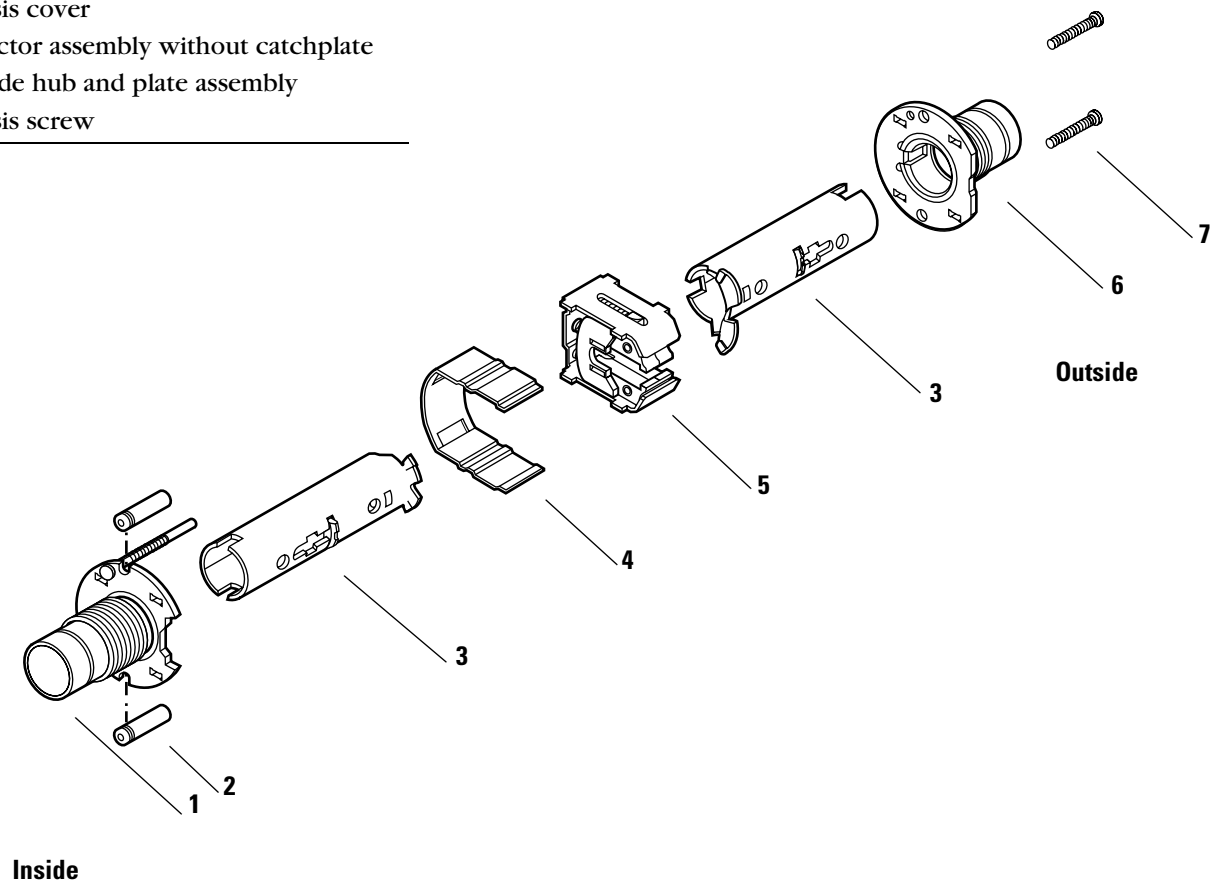


Figure 2.9 N function exploded diagram

NX FUNCTION CHASSIS—EXIT LOCK (ANSI F89)

Item	Part No.	Qty.	Description
1	B54749	1	Locking bar assembly for NX function†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54867	1	Key release cam assembly
8	B54808	1	Non-keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

† Specify finish.

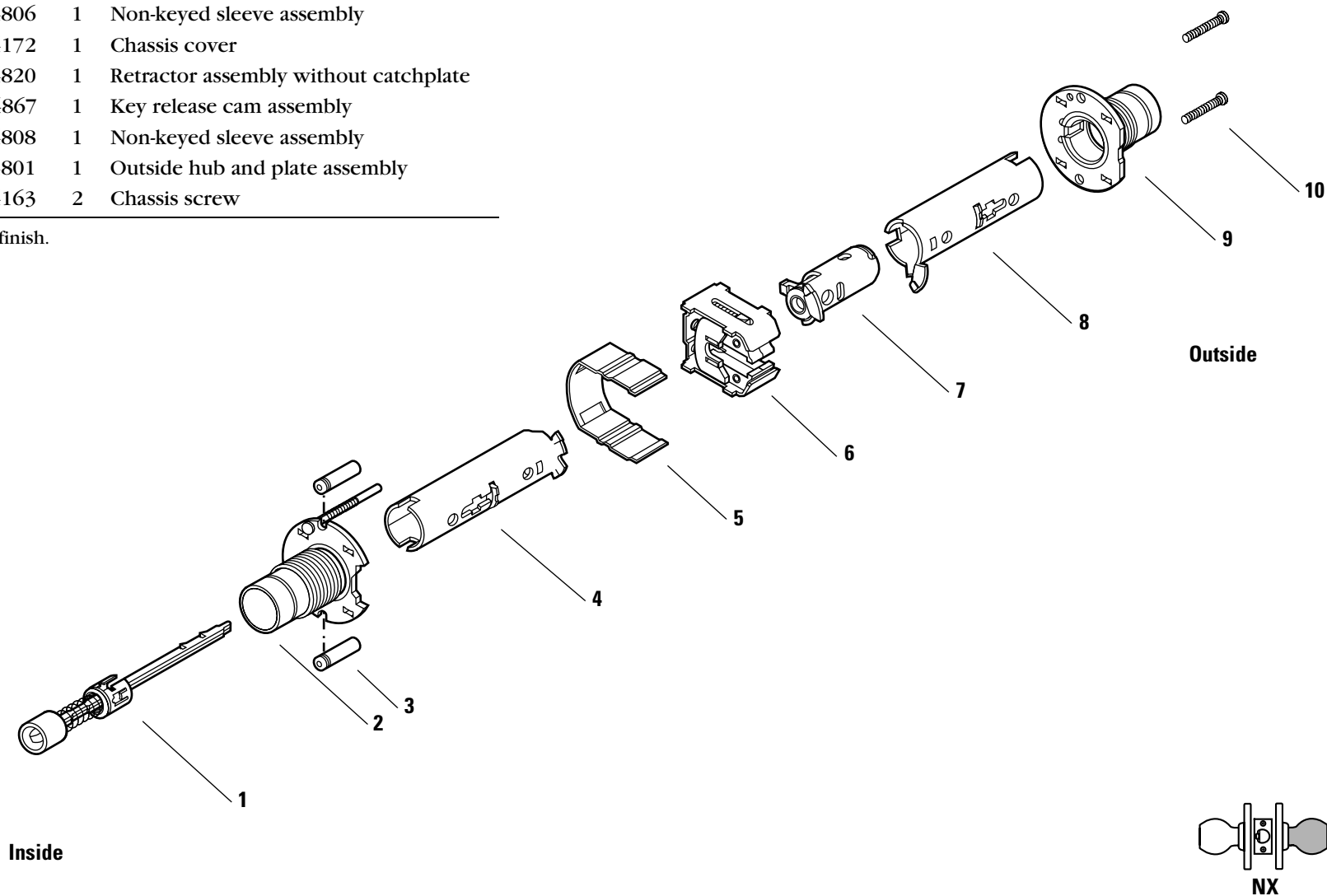


Figure 2.10 NX function exploded diagram

P FUNCTION CHASSIS—PATIO LOCK (ANSI F77)

Item	Part No.	Qty.	Description
1	B54744	1	Push button assembly†
2	A54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54867	1	Key release cam assembly
8	B54808	1	Non-keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

† Specify finish.

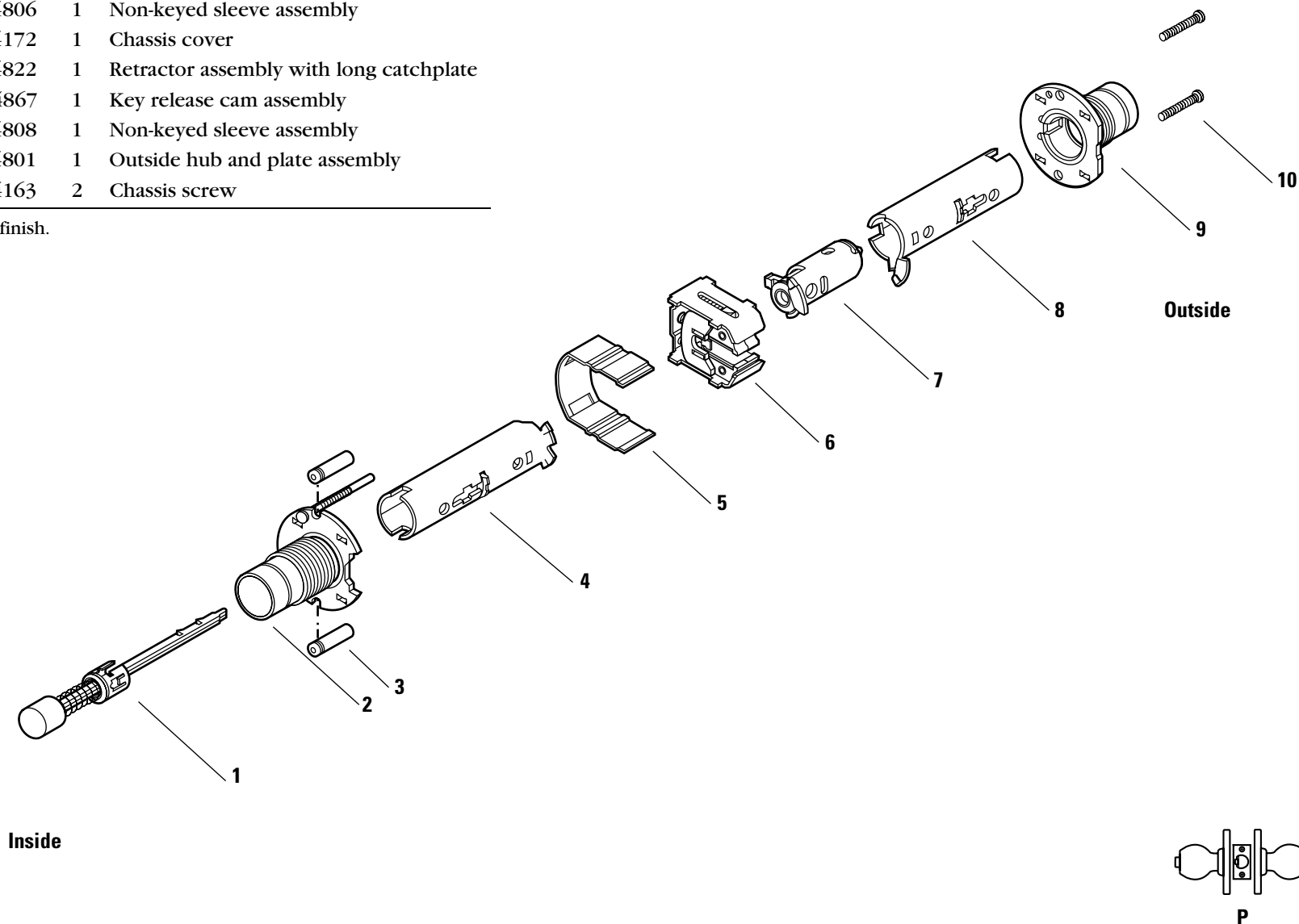


Figure 2.11 P function exploded diagram

R FUNCTION CHASSIS—CLASSROOM LOCK (ANSI F84)

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54806	1	Non-keyed sleeve assembly
4	B54172	1	Chassis cover
5	B54820	1	Retractor assembly without catchplate
6	A54862	1	Key release cam assembly
7	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
8	B54807	1	Keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

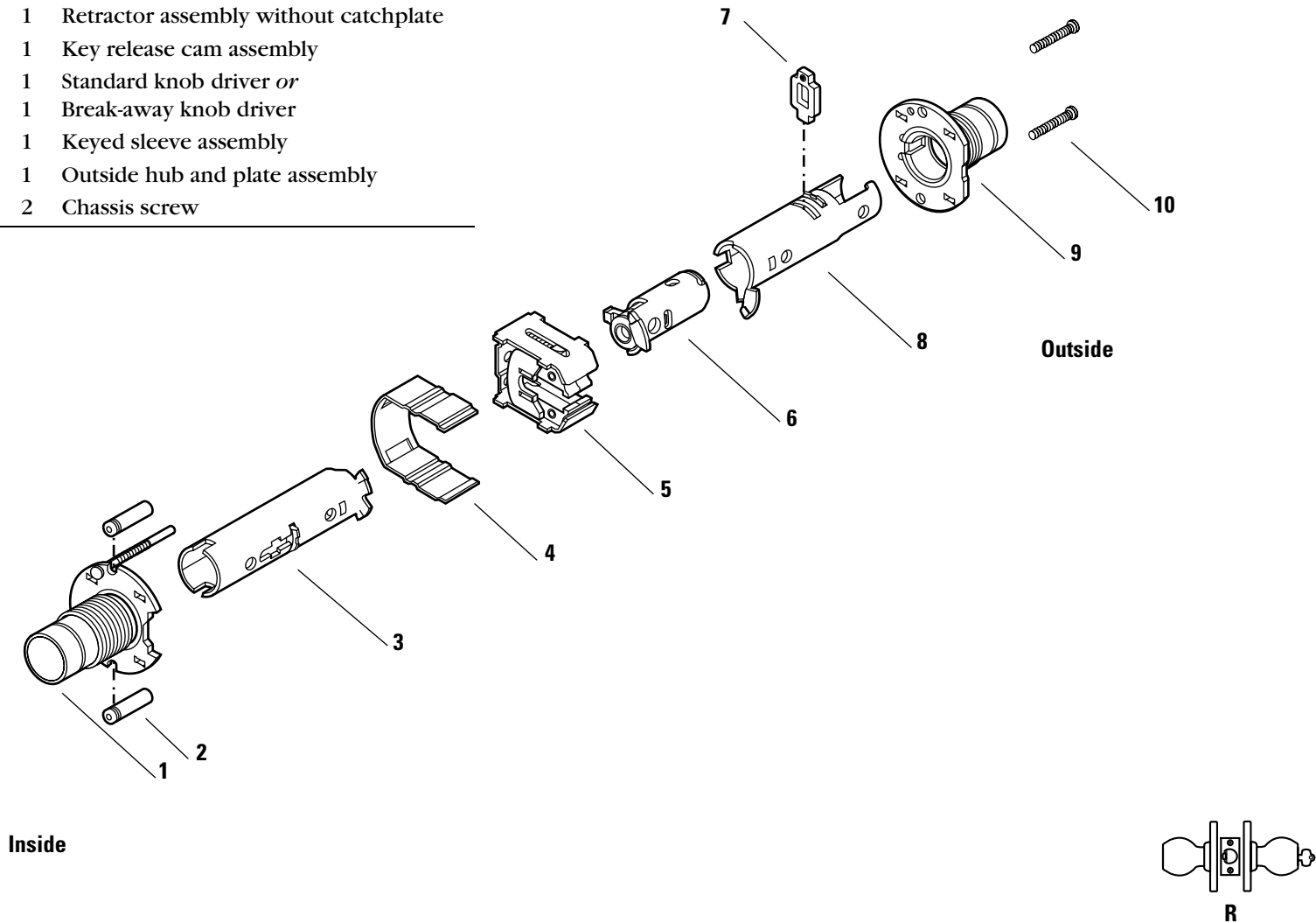


Figure 2.12 R function exploded diagram

S FUNCTION CHASSIS—COMMUNICATING LOCK (ANSI F80)

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
5	A54862	2	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	B54801	1	Outside hub and plate assembly
9	B54163	2	Chassis screw

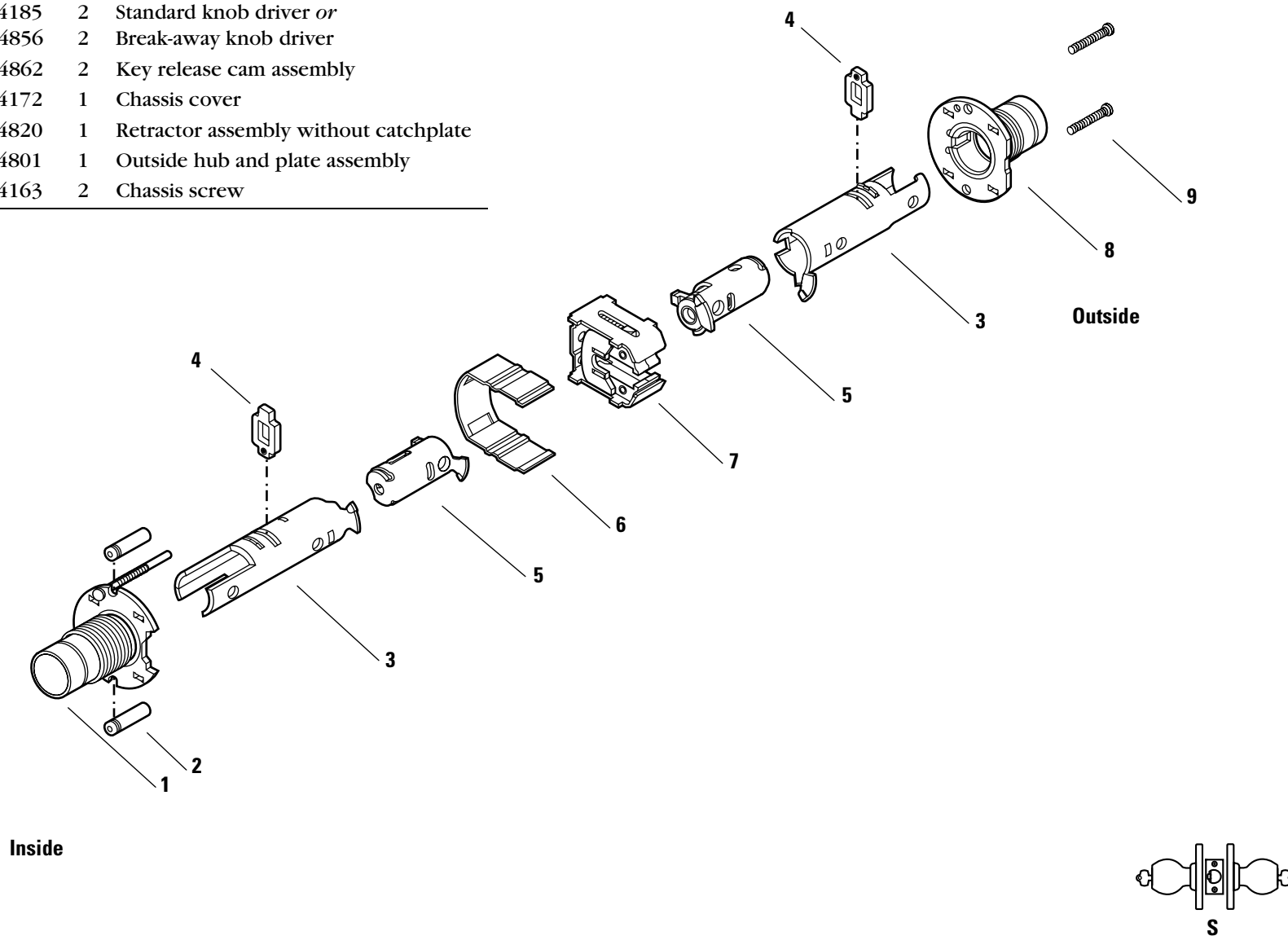


Figure 2.13 S function exploded diagram

T FUNCTION CHASSIS—DORMITORY LOCK (ANSI F90)

Item	Part No.	Qty.	Description
1	B54744	1	Push button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54862	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

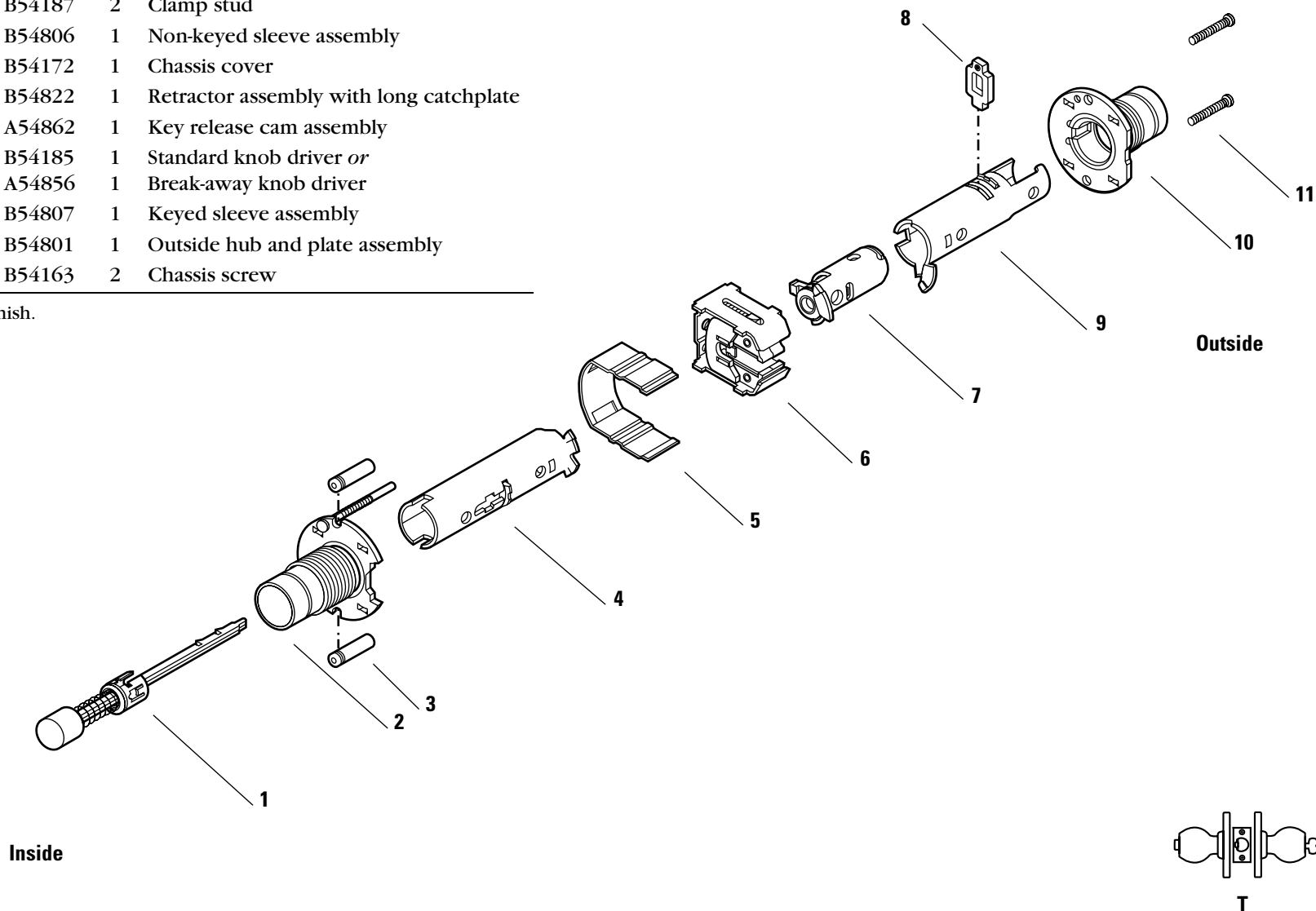


Figure 2.14 T function exploded diagram

W FUNCTION CHASSIS—UTILITY OR INSTITUTIONAL LOCK (ANSI F87)

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
5	A54861	2	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	B54801	1	Outside hub and plate assembly
9	B54163	2	Chassis screw

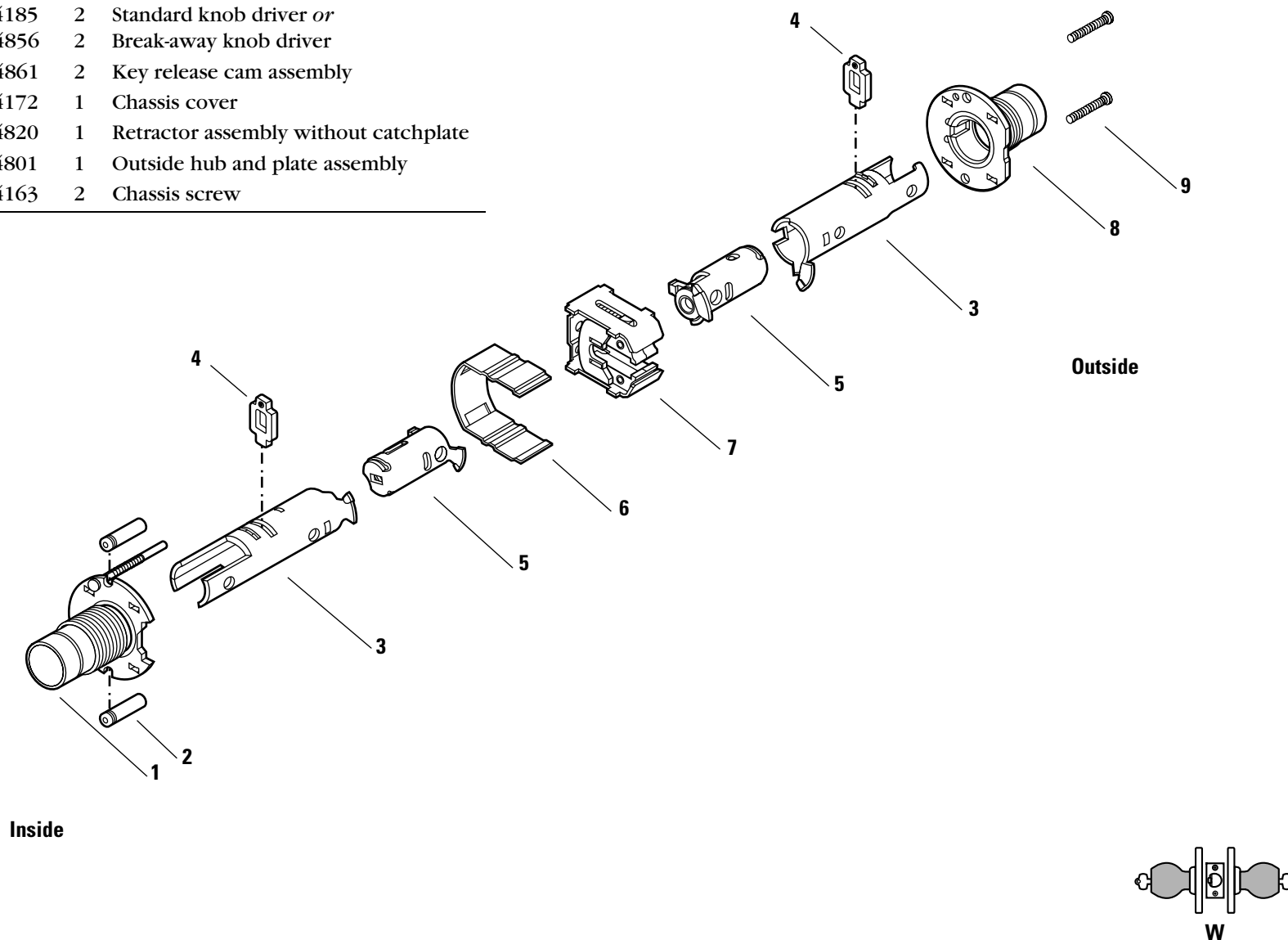


Figure 2.15 W function exploded diagram

Y FUNCTION CHASSIS—EXIT LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54806	1	Non-keyed sleeve assembly
4	B54172	1	Chassis cover
5	B54820	1	Retractor assembly without catchplate
6	B54809	1	Outside hub and plate assembly
7	B54163	2	Chassis screw
8	A54717	1	Outside convex rose for Y function [†]

[†] A54717 is the only outside rose available for this function.
Specify finish.

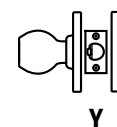
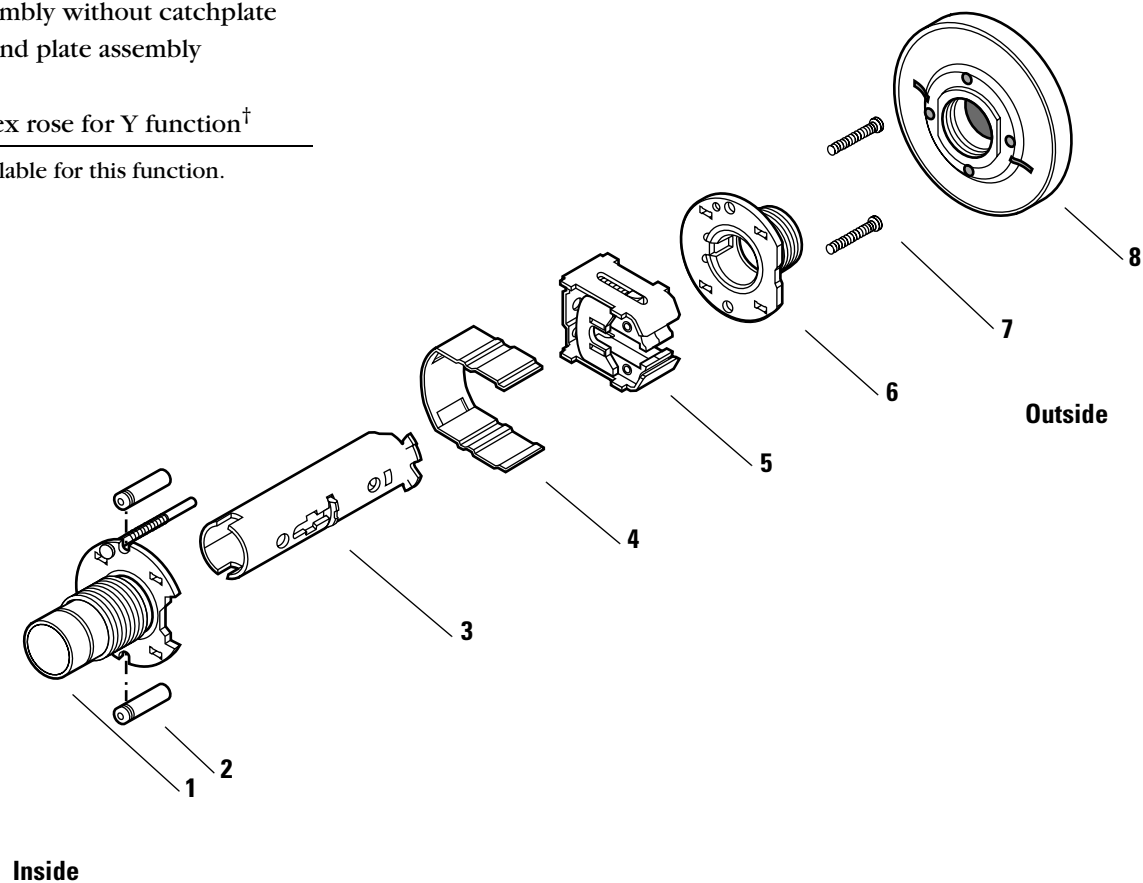


Figure 2.16 Y function exploded diagram

NON-STANDARD FUNCTIONS

A FUNCTION CHASSIS—ENTRANCE LOCK (ANSI F81)

Item	Part No.	Qty.	Description
1	B54742	1	Turn button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54860	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

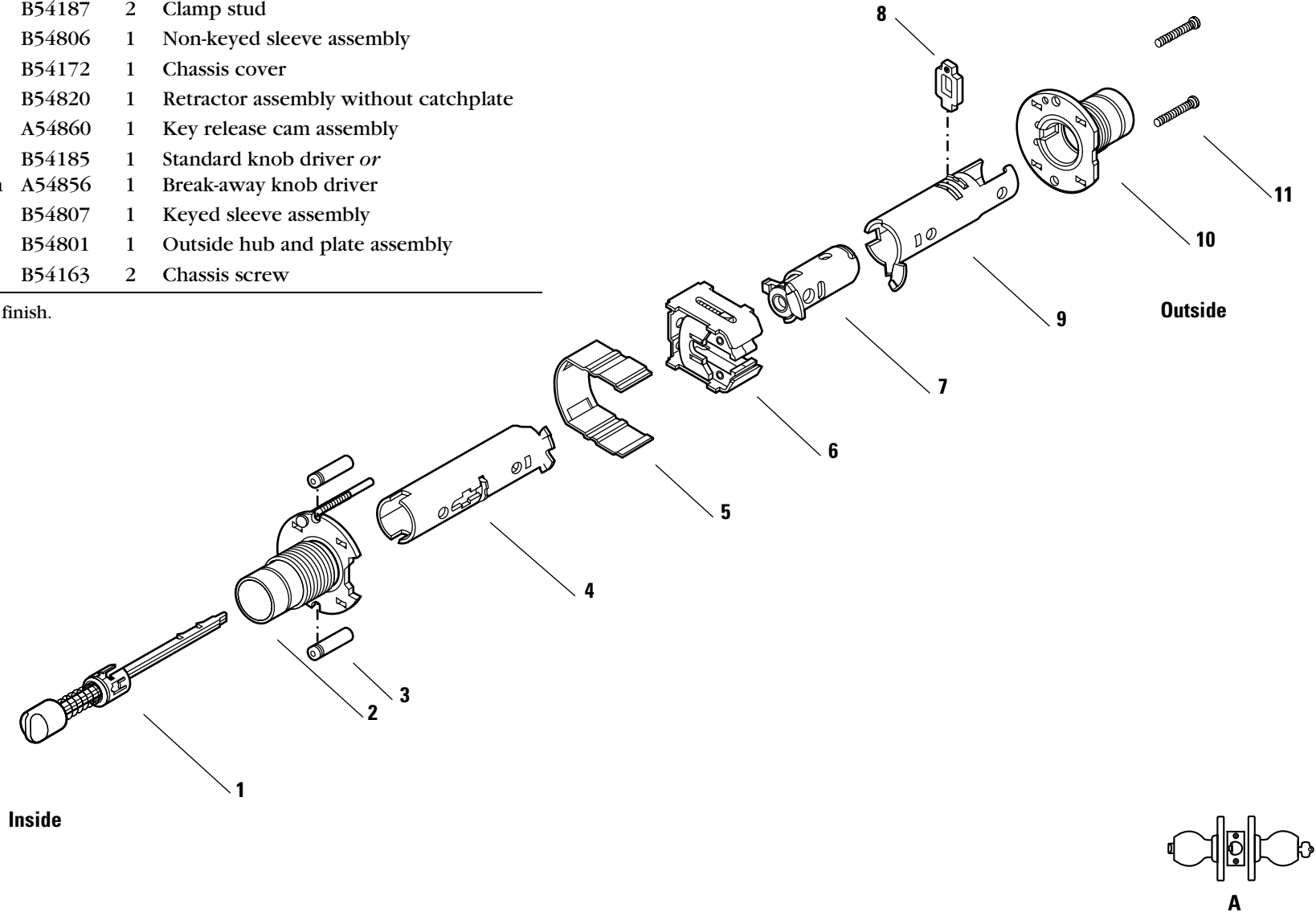


Figure 2.17 A function exploded diagram

B FUNCTION CHASSIS—OFFICE LOCK (ANSI F82)

Item	Part No.	Qty.	Description
1	B54744	1	Push button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54821	1	Retractor assembly with short catchplate
7	A54860	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

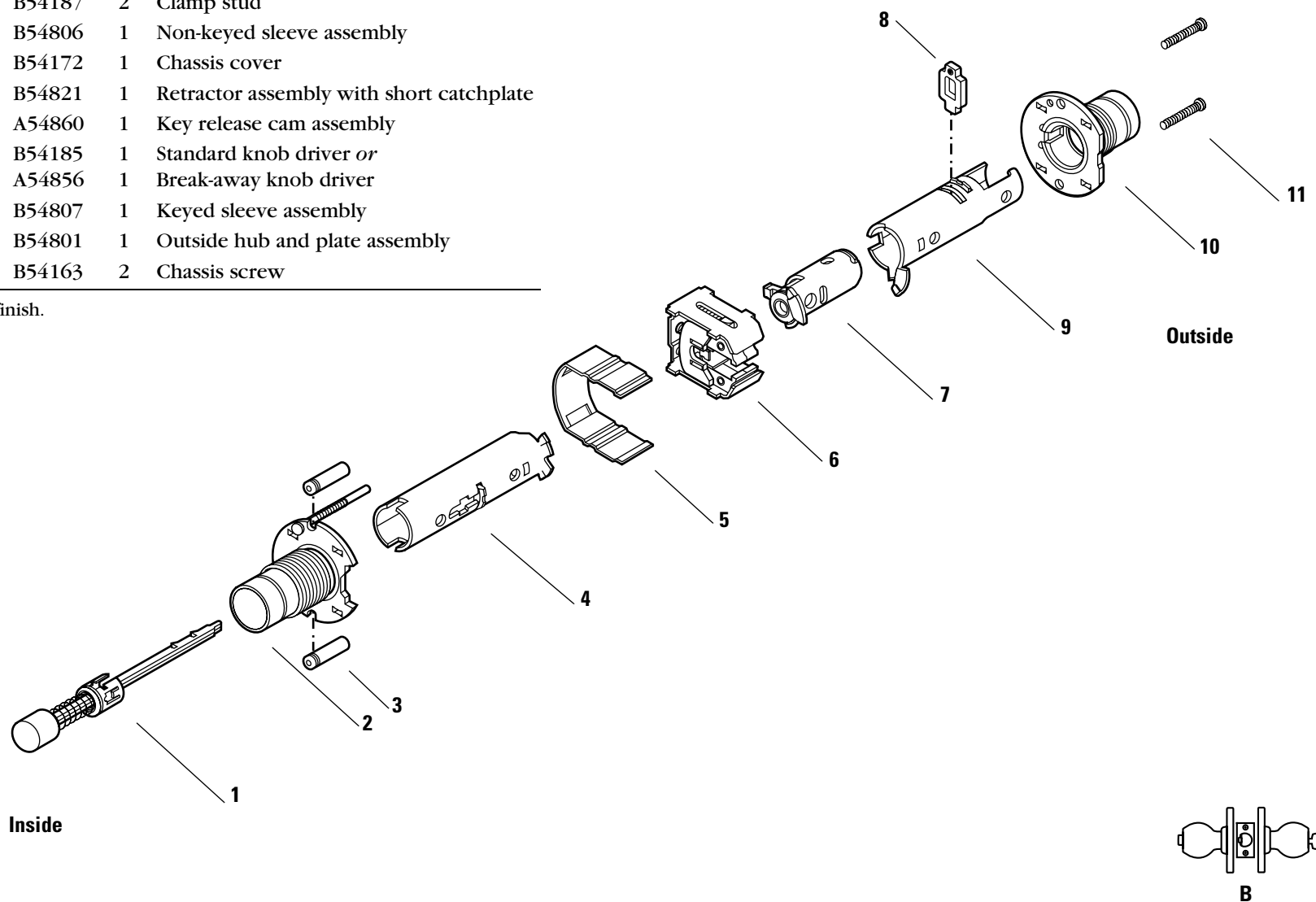


Figure 2.18 B function exploded diagram

DR FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
5	A54862	1	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	A54861	1	Key release cam assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

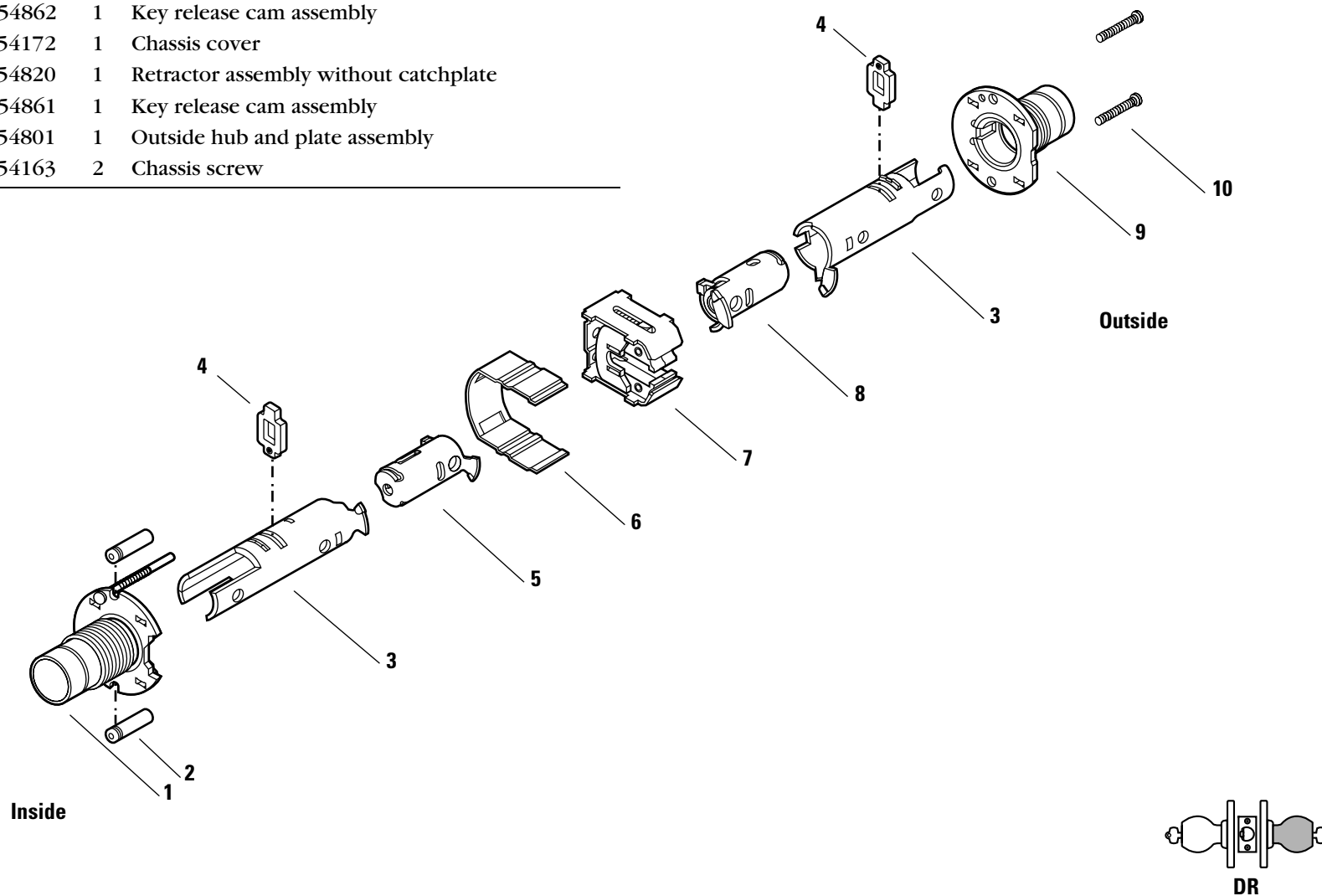


Figure 2.19 DR function exploded diagram

DZ FUNCTION CHASSIS—CLOSET OR STOREROOM LOCK

Item	Part No.	Qty.	Description
1	A54736	1	Turn blade assembly for “Z” function†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	A54835	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54861	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† You need to install an A or C style rose first before installing the turn blade assembly. See [page 2-44](#). Specify finish.

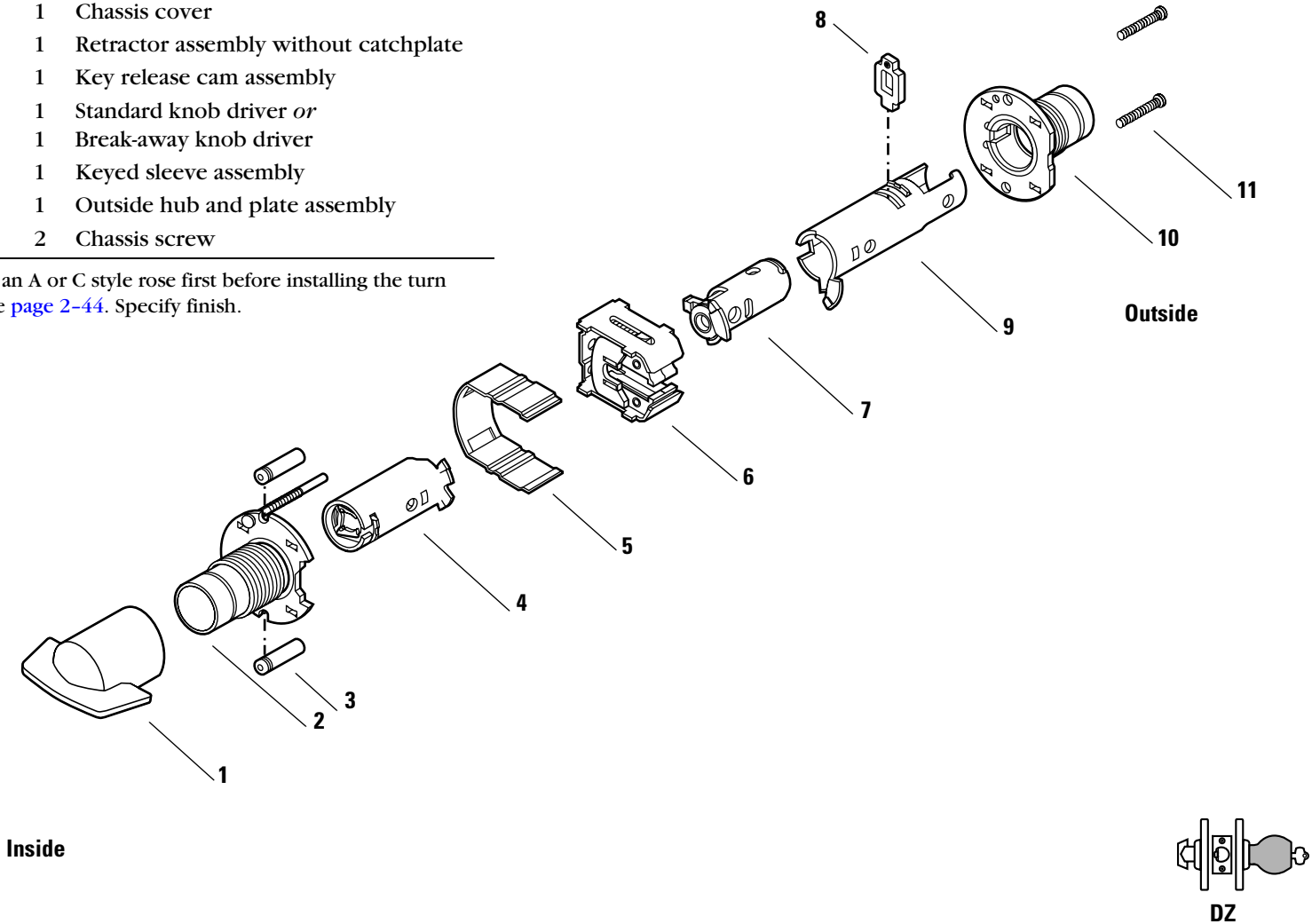


Figure 2.20 DZ function exploded diagram

EA FUNCTION CHASSIS—ENTRANCE OR OFFICE LOCK

Item	Part No.	Qty.	Description
1	B54748	1	Slotted button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54821	1	Retractor assembly with short catchplate
7	A54860	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

† Specify finish.

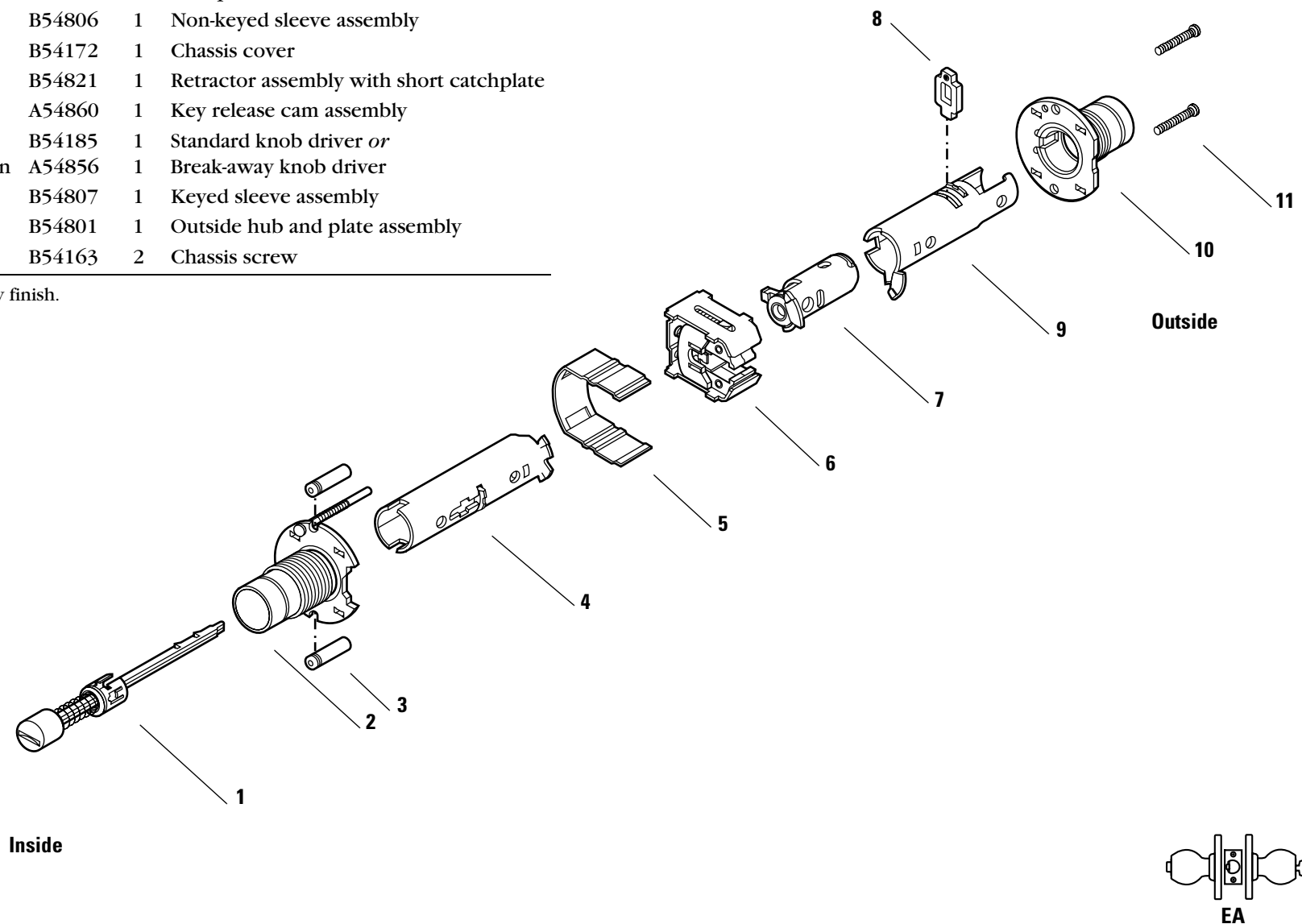


Figure 2.21 EA function exploded diagram

LL FUNCTION CHASSIS—HOSPITAL PRIVACY LOCK

Item	Part No.	Qty.	Description
1	B54744	1	Push button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54822	1	Retractor assembly with long catchplate
7	A54860	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54742	1	Turn button assembly
12	B54163	2	Chassis screw

† Specify finish.

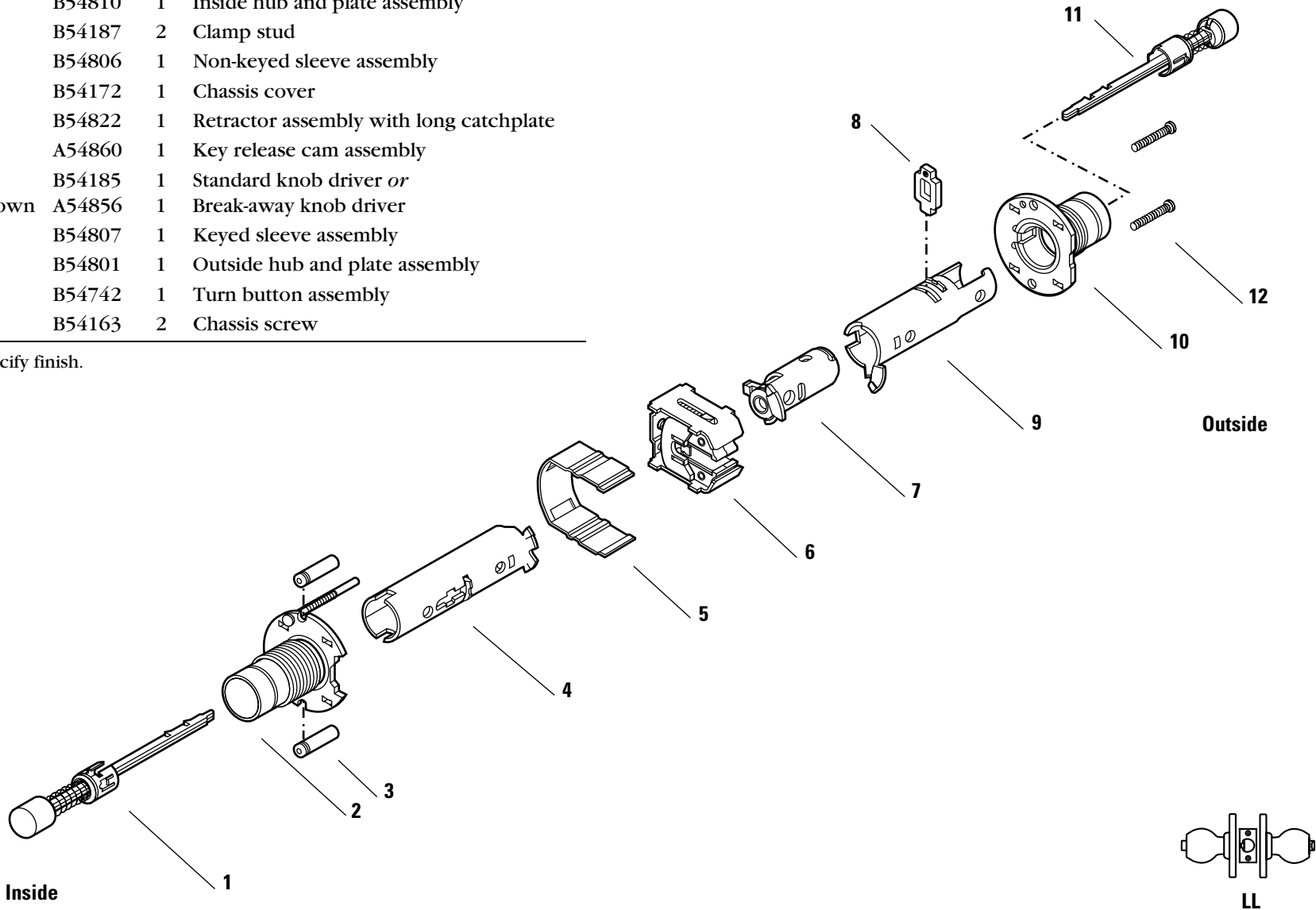


Figure 2.22 LL function exploded diagram

M FUNCTION CHASSIS—COMMUNICATING LOCK (ANSI F78)

Item	Part No.	Qty.	Description
1	B54742	2	Turn button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54808	2	Non-keyed sleeve assembly
5	A54866	2	Key release cam assembly
6	B54172	1	Chassis cover
7	A54204	1	Bridge bar
8	B54820	1	Retractor assembly without catchplate
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

† Specify finish.

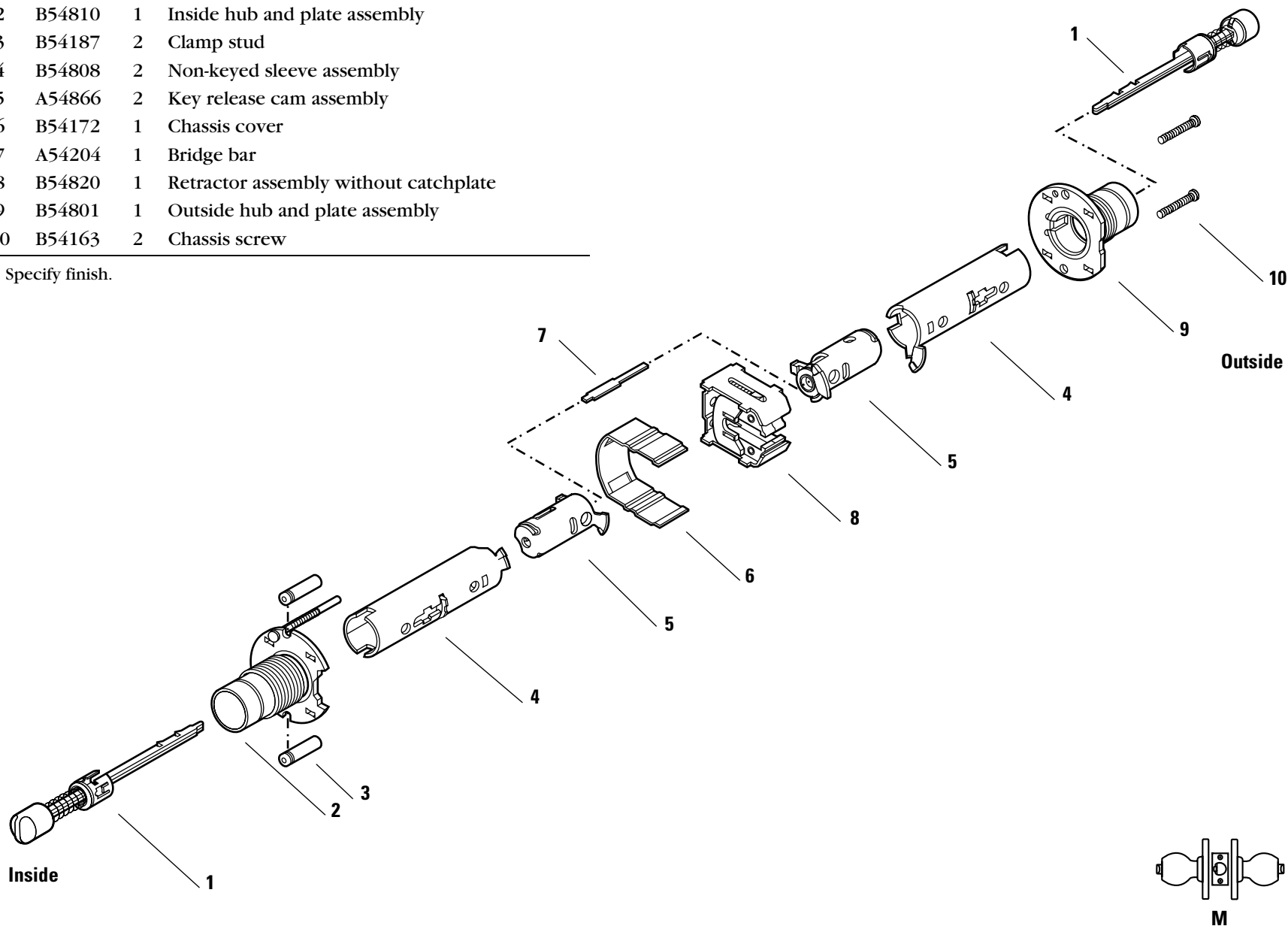


Figure 2.23 M function exploded diagram

Q FUNCTION CHASSIS—EXIT LOCK (ANSI F83)

Item	Part No.	Qty.	Description
1	B54742	1	Turn button assembly†
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	B54806	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54867	1	Key release cam assembly
8	B54808	1	Non-keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

† Specify finish.

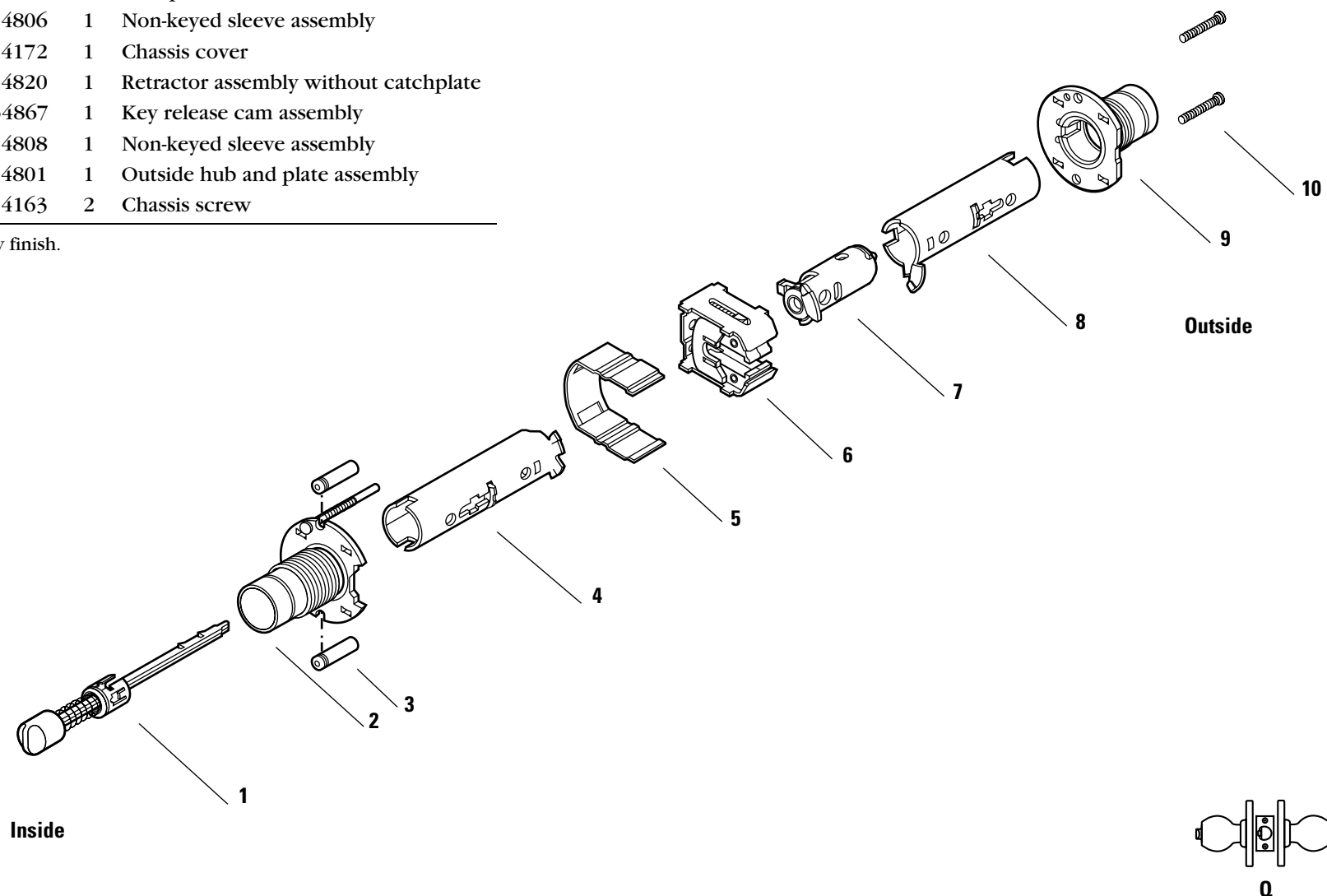


Figure 2.24 Q function exploded diagram

RD FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	2	Keyed sleeve assembly
4	A54861	1	Key release cam assembly
5	B54185	2	Standard knob driver <i>or</i>
not shown	A54856	2	Break-away knob driver
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	A54862	1	Key release cam assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

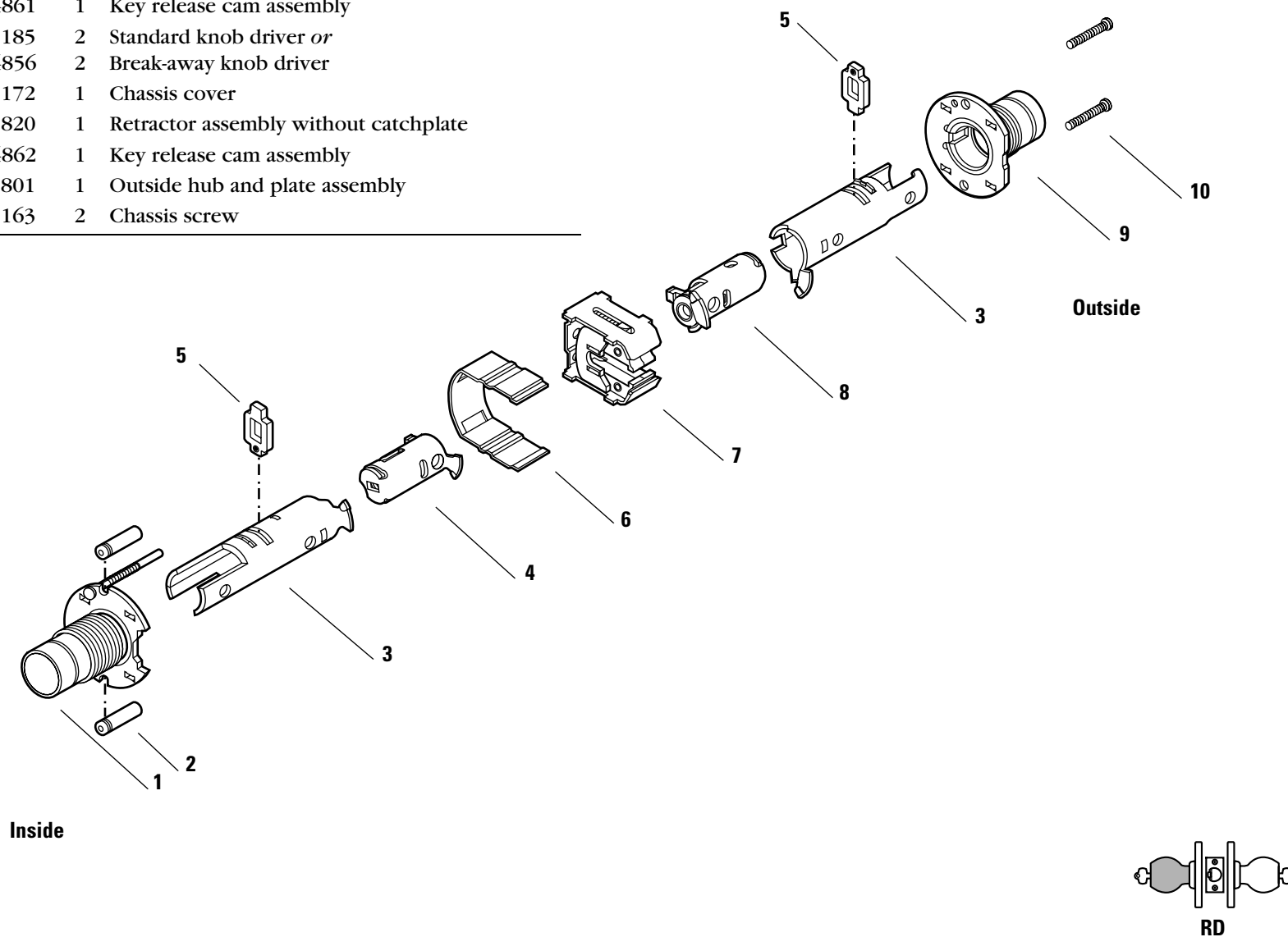


Figure 2.25 RD function exploded diagram

RH FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54806	1	Non-keyed sleeve assembly
4	B54172	1	Chassis cover
5	B54820	1	Retractor assembly without catchplate
6	A54862	1	Key release cam assembly
7	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
8	B54836	1	Keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

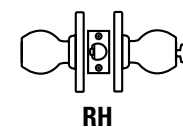
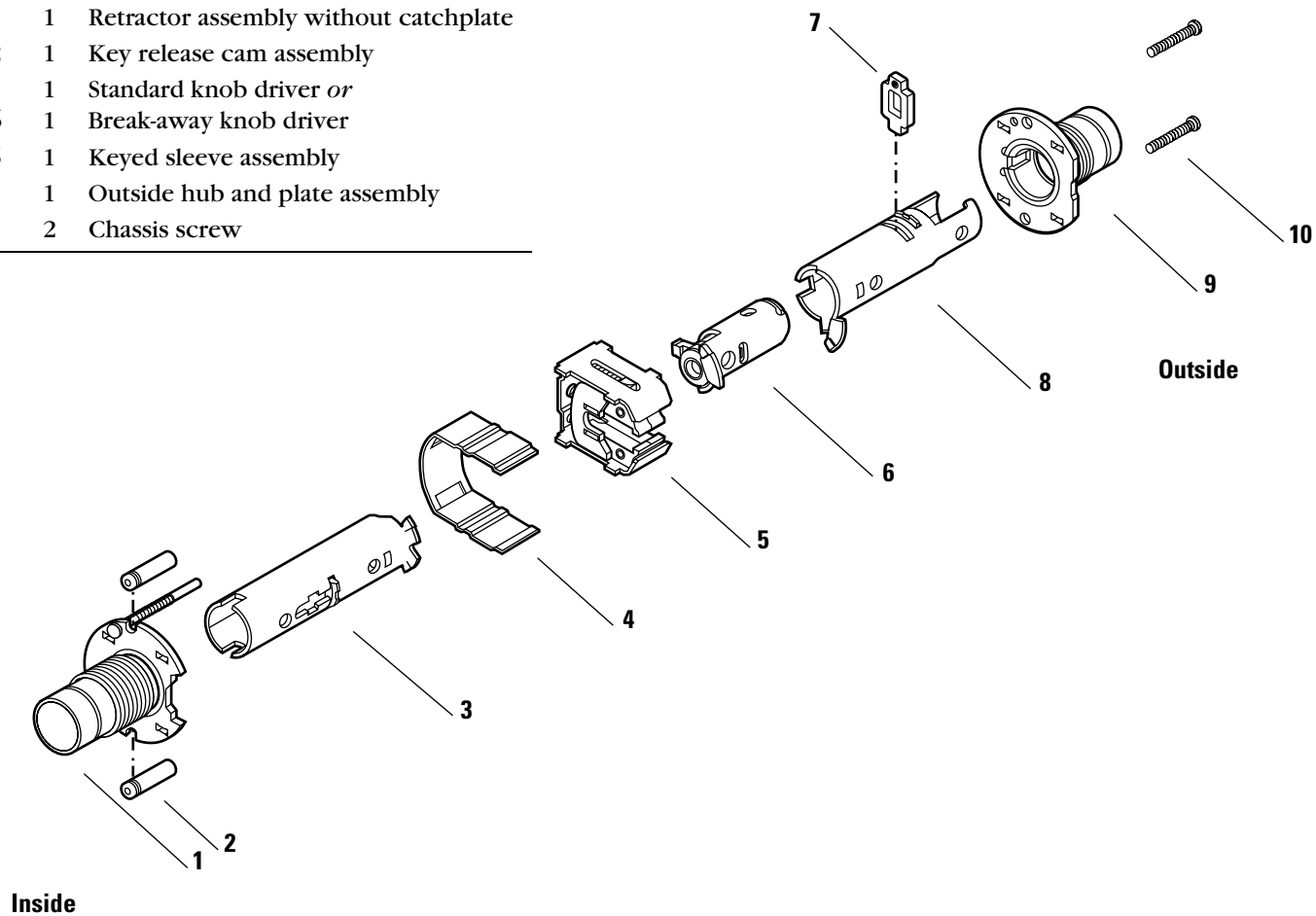


Figure 2.26 RH function exploded diagram

RZ FUNCTION CHASSIS—CLOSET OR STOREROOM LOCK

Item	Part No.	Qty.	Description
1	A54736	1	Turn blade assembly for Z function [†]
2	B54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	A54835	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54862	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

[†] You need to install an A or C style rose first before installing the turn blade assembly. See [page 2-44](#). Specify finish.

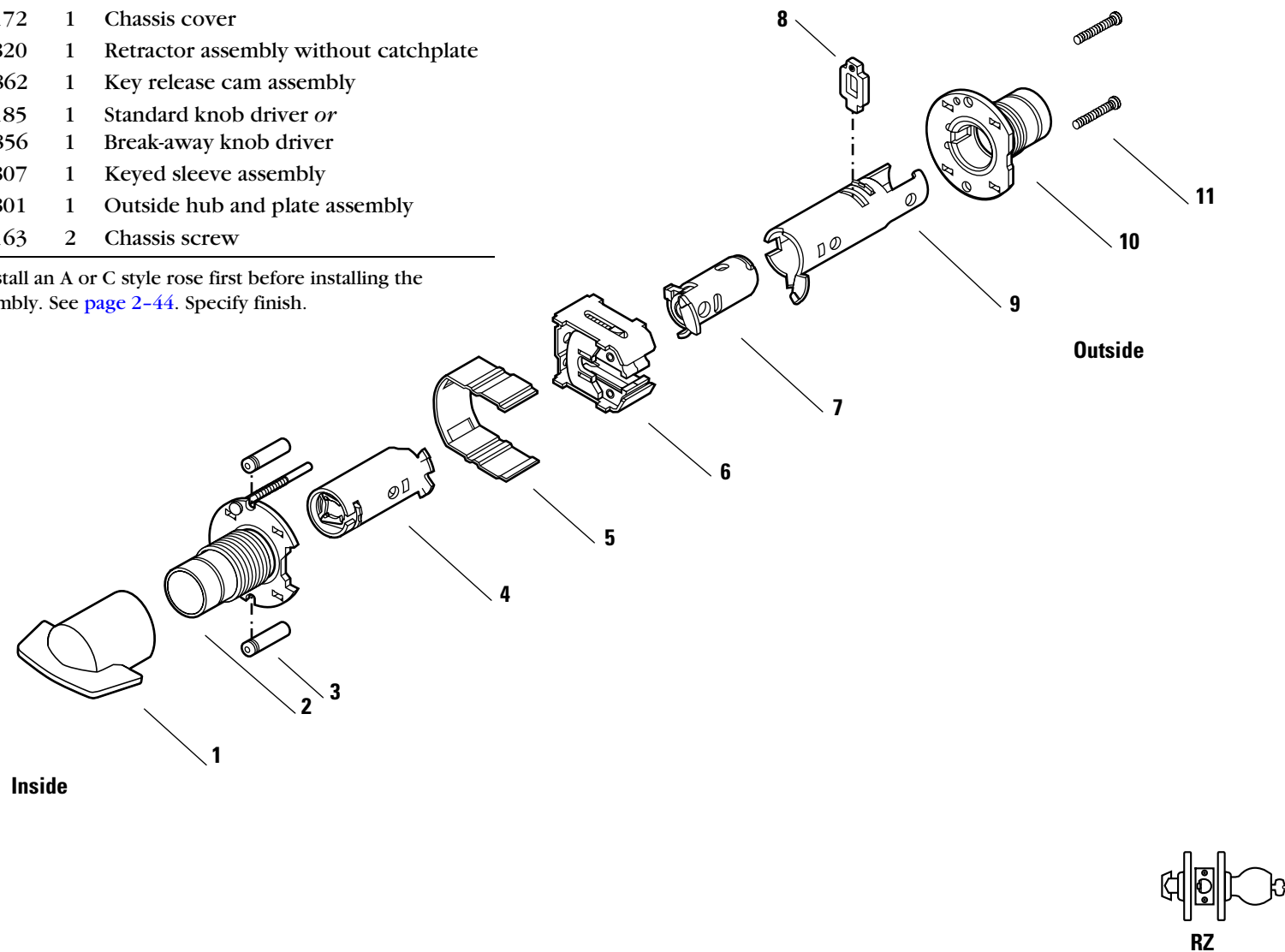


Figure 2.27 RZ function exploded diagram

XD FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	1	Keyed sleeve assembly
4	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
5	A54861	1	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	B54808	1	Non-keyed sleeve assembly
9	B54801	1	Outside hub and plate assembly
10	B54163	2	Chassis screw

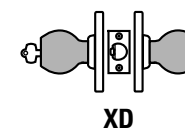
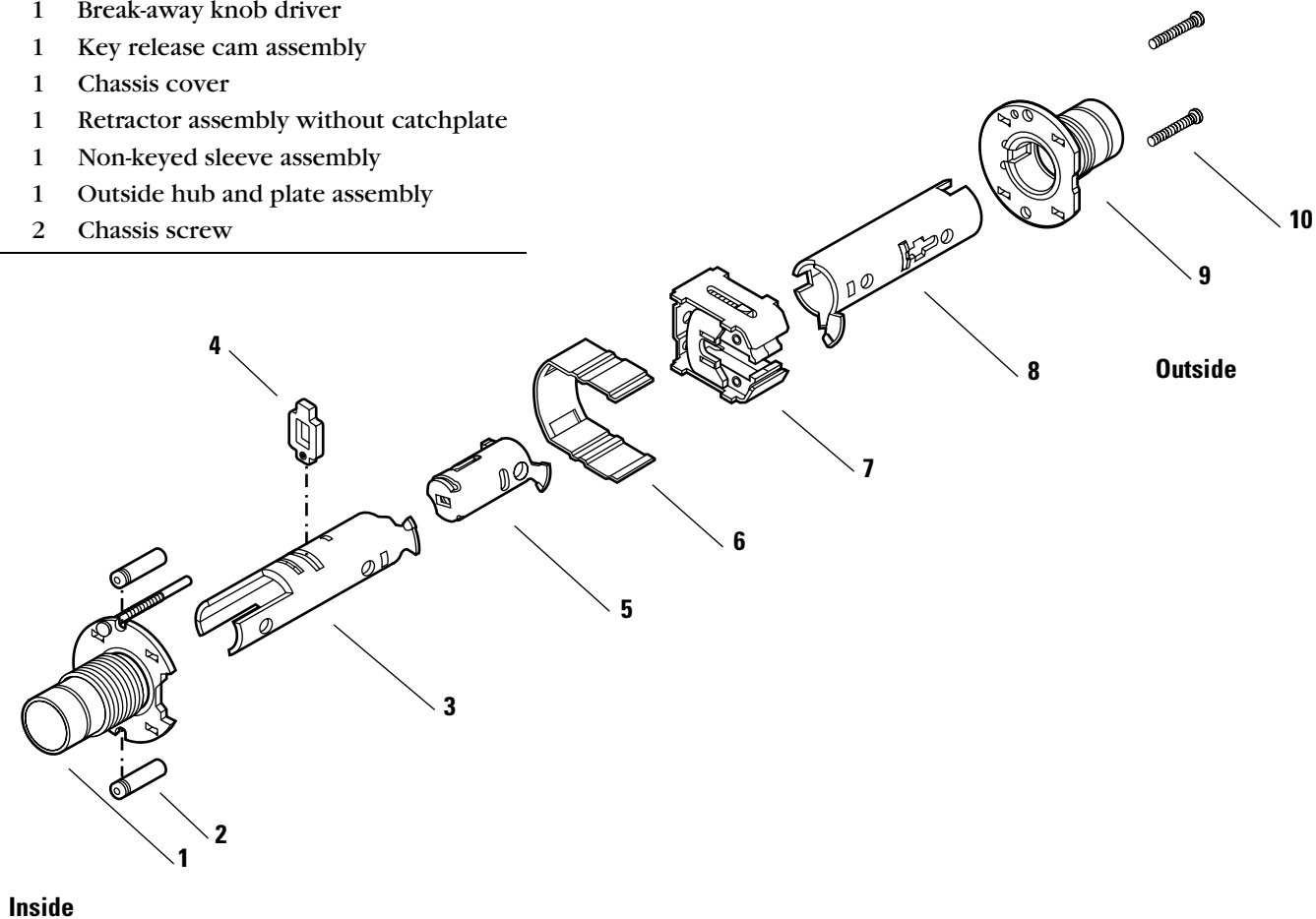


Figure 2.28 XD function exploded diagram

XR FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54808	1	Non-keyed sleeve assembly
4	A54861	1	Key release cam assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	A54862	1	Key release cam assembly
8	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
9	B54807	1	Keyed sleeve assembly
10	B54801	1	Outside hub and plate assembly
11	B54163	2	Chassis screw

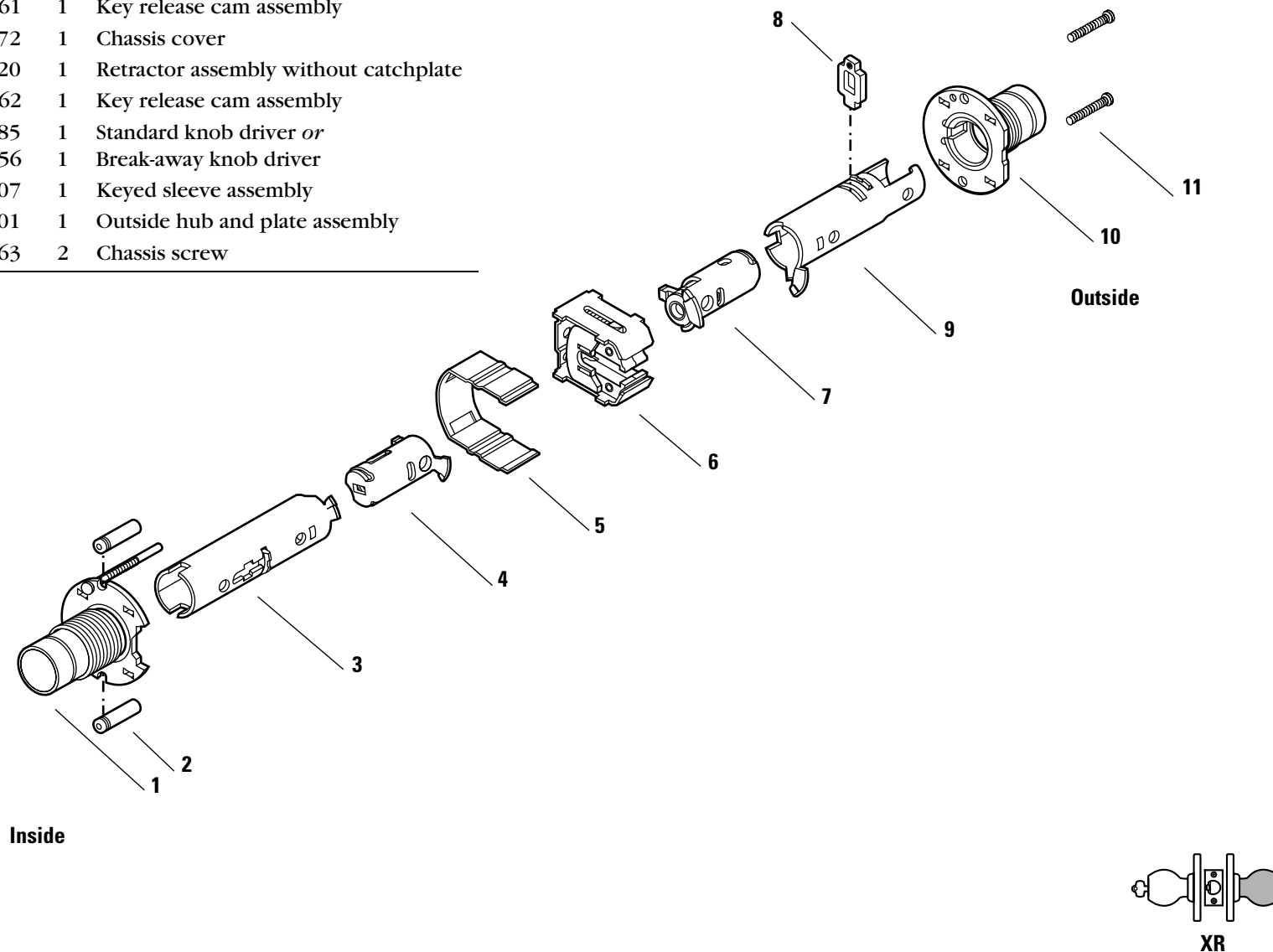


Figure 2.29 XR function exploded diagram

YD FUNCTION CHASSIS—EXIT LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	1	Keyed sleeve assembly
4	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
5	A54861	1	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	B54809	1	Outside hub and plate assembly
9	B54163	2	Chassis screw
10	A54717	1	Outside convex rose for Y function [†]

[†] A54717 is the only available outside rose for this function. Specify finish.

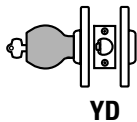
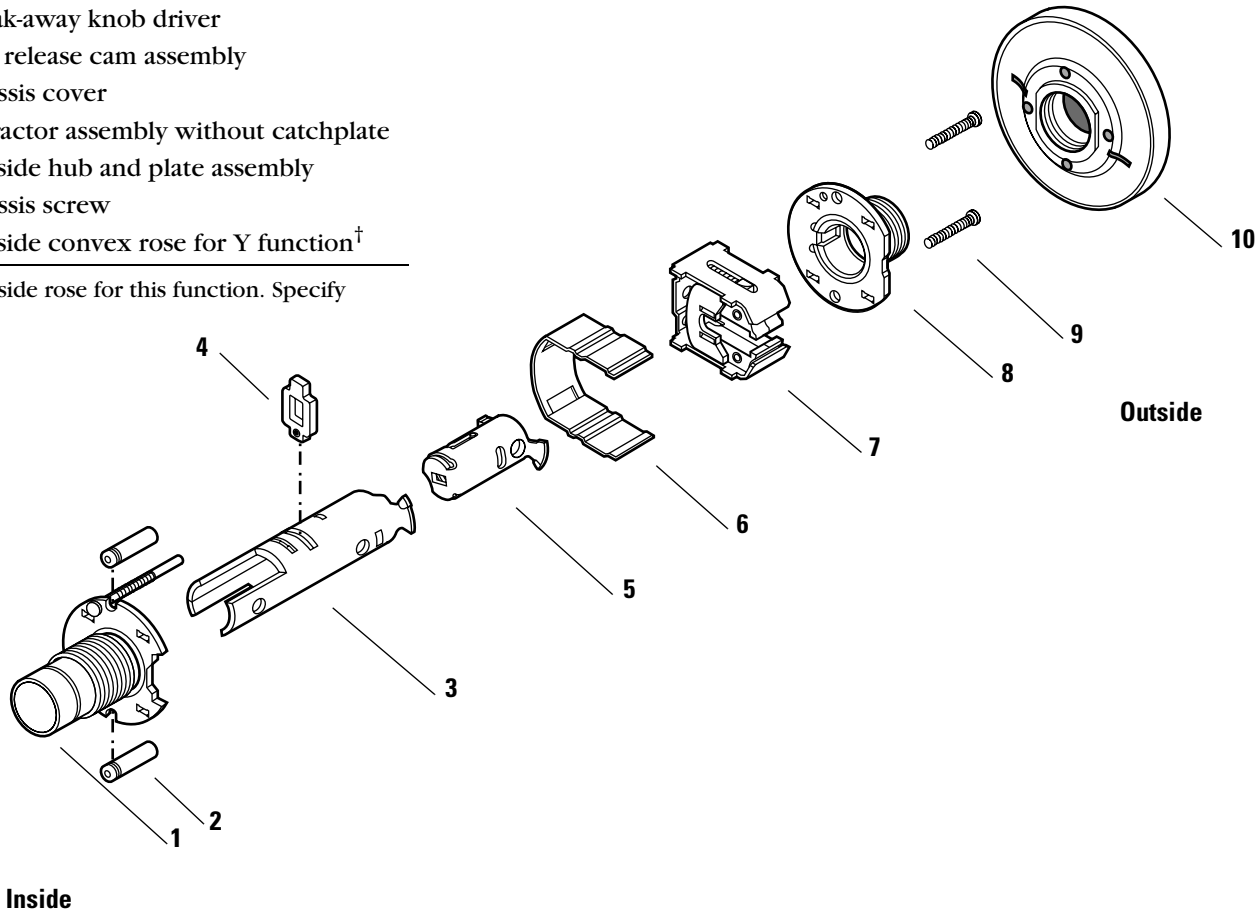


Figure 2.30 YD function exploded diagram

YR FUNCTION CHASSIS—SPECIAL LOCK

Item	Part No.	Qty.	Description
1	B54810	1	Inside hub and plate assembly
2	B54187	2	Clamp stud
3	B54807	1	Keyed sleeve assembly
4	B54185	1	Standard knob driver <i>or</i>
not shown	A54856	1	Break-away knob driver
5	A54862	1	Key release cam assembly
6	B54172	1	Chassis cover
7	B54820	1	Retractor assembly without catchplate
8	B54809	1	Outside hub and plate assembly
9	B54163	2	Chassis screw
10	A54717	1	Outside rose for Y function [†]

[†] A54717 is the only available outside rose for this function. Specify finish.

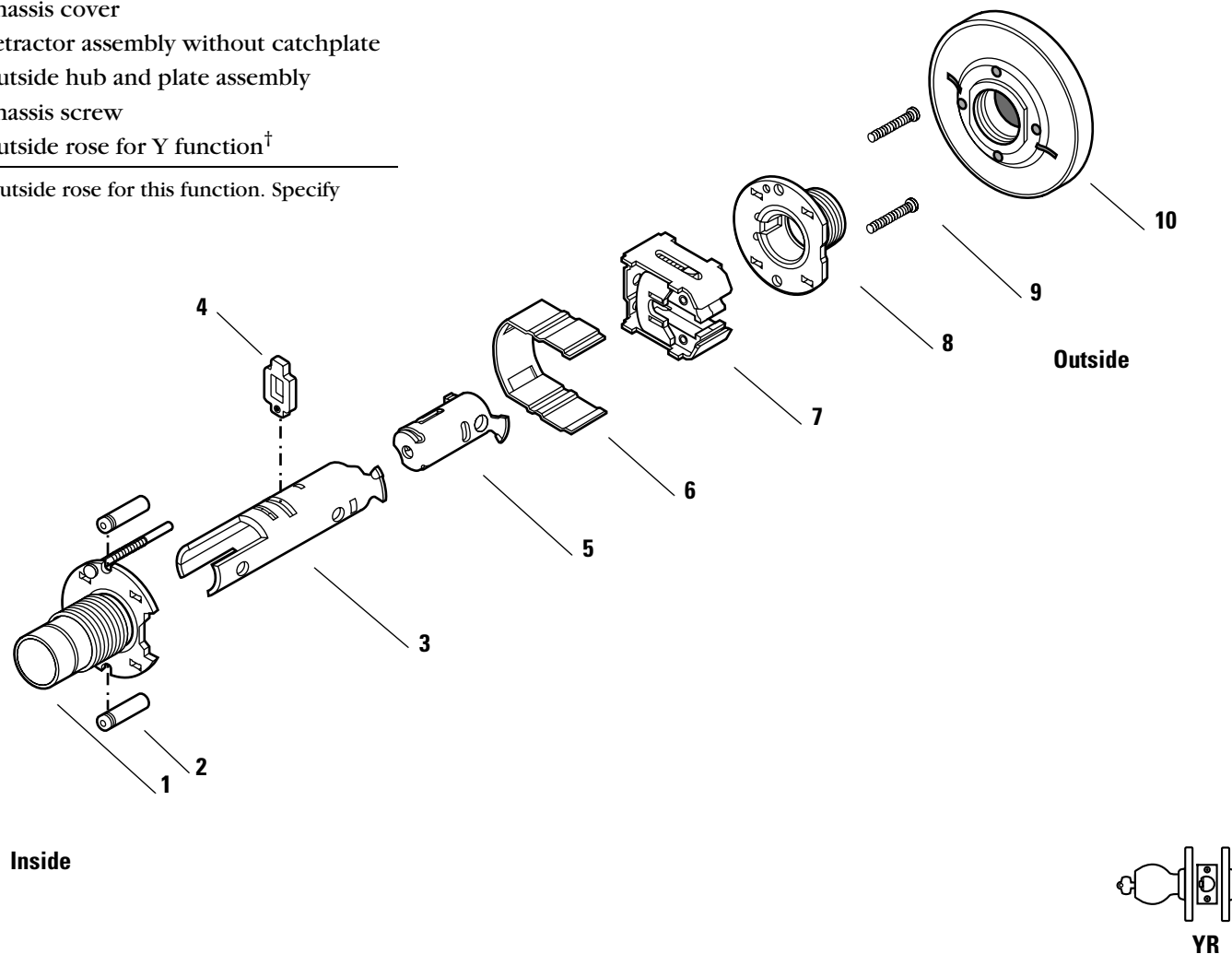


Figure 2.31 YR function exploded diagram

Z FUNCTION CHASSIS—CLOSE T LOCK

Item	Part No.	Qty.	Description
1	A54736	1	Turn blade assembly for Z function [†]
2	A54810	1	Inside hub and plate assembly
3	B54187	2	Clamp stud
4	A54835	1	Non-keyed sleeve assembly
5	B54172	1	Chassis cover
6	B54820	1	Retractor assembly without catchplate
7	B54806	1	Non-keyed sleeve assembly
8	B54801	1	Outside hub and plate assembly
9	B54163	2	Chassis screw

[†] You need to install an A or C style rose first before installing the turn blade assembly. See [page 2-44](#). Specify finish.

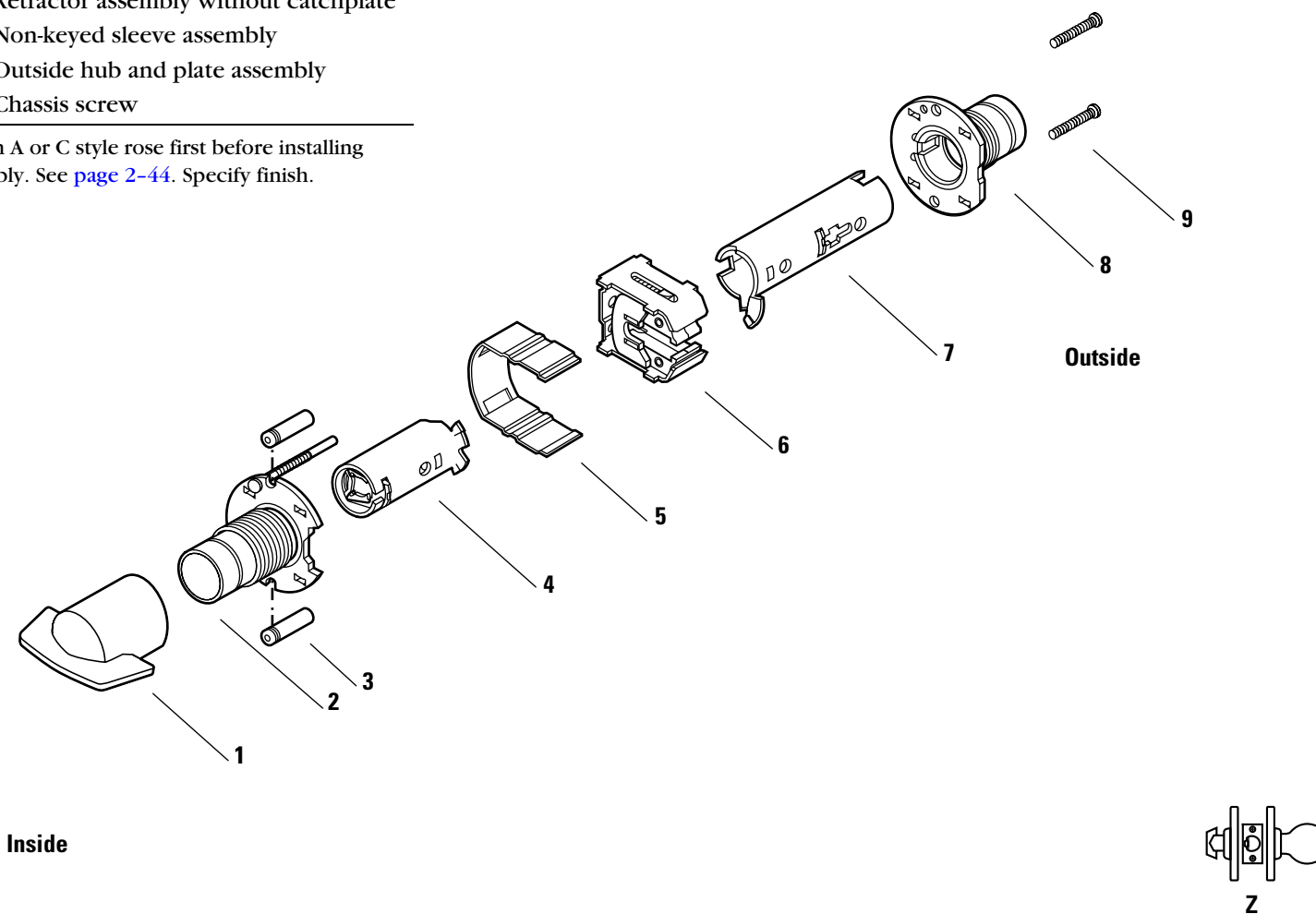


Figure 2.32 Z function exploded diagram

FUNCTION CONVERSION

If you want to convert the function of an existing 8K Lock, use the following tables to determine the internal parts that you need. Unless otherwise noted, a quantity of one is used for each part.

Compare the column of the function you currently have with the column of the function you need to determine the new parts necessary for conversion.

Standard functions

Part No.	Description	AB	C	D	E	G	H/HJ	L	N	NX	P	R	S	T	W	Y
A54745	Button release assembly [†]							■								
B54742	Turn button assembly [†]	■														
B54744	Push button assembly [†]						■	■			■			■		
B54748	Slotted button assembly [†]				■											
B54810	Inside hub & plate assembly	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B54801	Outside hub & plate assembly	■	■	■	■	■		■	■	■	■	■	■	■	■	
B54809	Outside hub & plate assembly															■
A54717	Outside convex rose for Y function [†]															■
B54806	Non-keyed sleeve assembly	■		■	■		■	■	■ [‡]	■	■	■		■		
B54808	Non-keyed sleeve assembly							■		■	■					
B54807	Keyed sleeve assembly	■	■ [‡]	■	■	■ [‡]						■	■ [‡]	■	■ [‡]	
B54832	Keyed sleeve and hub assembly						■									
B54185	Knob driver <i>or</i>	■	■ [‡]	■	■	■ [‡]						■	■ [‡]	■	■ [‡]	
A54856	Breakaway driver															
B54172	Chassis cover	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B54822	Retractor assembly with long catchplate	■			■		■	■			■			■		
B54820	Retractor assembly without catchplate		■	■		■			■	■		■	■		■	■
A54860	Key release cam assembly	■	■		■			■								
A54861	Key release cam assembly			■												■ [‡]
A54862	Key release cam assembly											■	■ [‡]	■		
A54863	Key release cam assembly		■													
A54864	Key release cam assembly					■ [‡]										
A54865	Key release cam assembly						■									
A54867	Key release cam assembly									■	■					
B54749	Locking bar assembly for NX function									■						
A54190	Locking bar		■													
A54195	Locking bar					■										
B54187	Clamp stud (quantity 2)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B54163	Chassis screw (quantity 2)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

[†] Specify finish.

[‡] Requires two.

Non-standard functions

Part No.	Description	A	B	DR	DZ	EA	LL	M	Q	RD	RH	RZ	XD	XR	YD	YR	Z
A54736	Turn blade assembly for Z function [†]				■							■					■
B54742	Turn button assembly [†]	■					■	■ [‡]	■								
B54744	Push button assembly [†]		■				■										
B54748	Slotted button assembly [†]					■											
B54810	Inside hub and side plate assembly	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B54801	Outside hub & plate assembly	■	■	■	■	■	■	■	■	■	■	■	■	■			■
B54809	Outside hub & plate assembly														■	■	
A54717	Outside convex rose for Y function [†]														■	■	
B54806	Non-keyed sleeve assembly	■	■			■	■		■		■						■
B54808	Non-keyed sleeve assembly							■ [‡]	■				■	■			
A54835	Non-keyed sleeve assembly				■							■					■
B54836	Keyed sleeve assembly										■						
B54807	Keyed sleeve assembly	■	■	■ [‡]	■	■	■			■ [‡]			■	■	■	■	
B54185	Knob driver <i>or</i>	■	■	■ [‡]	■	■	■			■ [‡]	■	■	■	■	■	■	
A54856	Breakaway driver																
B54172	Chassis cover	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
A54204	Bridge bar							■									
B54820	Retractor assembly without catchplate	■		■	■			■	■	■	■	■	■	■	■	■	■
B54821	Retractor assembly with short catchplate		■			■											
B54822	Retractor assembly long catchplate						■										
A54860	Key release cam assembly	■	■			■	■										
A54861	Key release cam assembly			■	■								■	■	■		
A54862	Key release cam assembly			■						■	■	■		■		■	
A54866	Key release cam assembly							■ [‡]									
A54867	Key release cam assembly								■								
B54187	Clamp stud (quantity 2)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B54163	Chassis screw (quantity 2)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

† Specify finish.

‡ Requires two.

TRIM PARTS

Standard strikes
and strike boxes

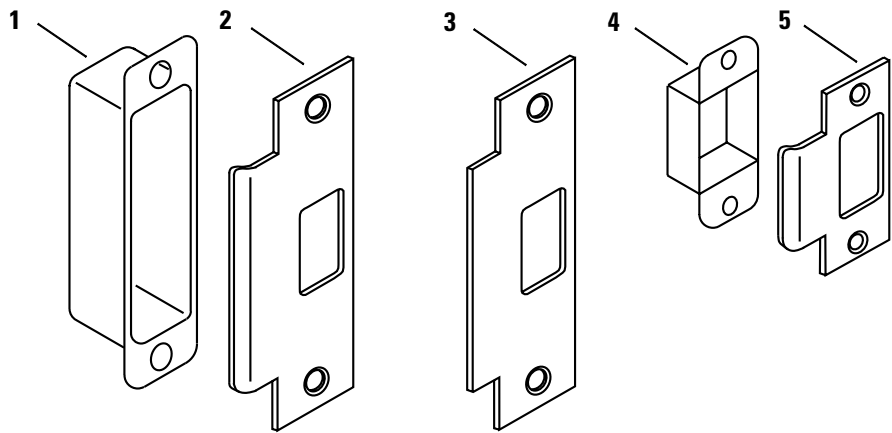


Figure 2.33 Standard strikes and strike boxes

Standard strikes and strike boxes parts list

Item	Nomen- clature	Part no.	Description
1	30HS4	B34380	ANSI Plastic strike box
2	8KS3 [†]	B25641	ANSI Strike
3	8KS3-7/8 [†]	C63016	ANSI 7/8" flat lip strike
4	8KS1	B25640	Standard steel strike box
5	8KS2 [‡]	B25639	Standard strike package

[†] Use the nomenclature to order the ANSI strike package, which includes the strike, two A25359 screws, and two A18724 screws. Specify finish.

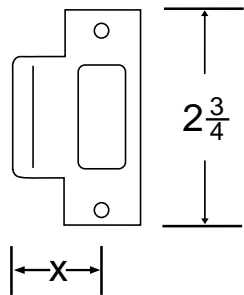
[‡] Use the nomenclature to order the standard strike package, which includes the strike and four A25359 screws. Specify finish.

Non-standard
strikes

Non-standard strikes parts list

Part no. [†]	Description
B54063	7/8" flat lip strike
B54064	1 " lip strike
B54065	1 1/8" lip strike
B54066	1 1/2" lip strike
B54067	1 3/4" lip strike
B54068	2" lip strike
B54069	2 1/4" lip strike
B54070	2 1/2" lip strike
B54071	3" lip strike
B54072	4" lip strike

[†] Specify finish.



The measurement is taken from the edge of the lip to the center of the screw holes.

Figure 2.34 Understanding strike lip measurement

Lead-lined parts

The lead-lined option is available for new lock orders only. Because individual lead-lined parts are not field-serviceable, they are not available to order for replacement parts. In the following graphic, the shaded portions indicate the lead shields.

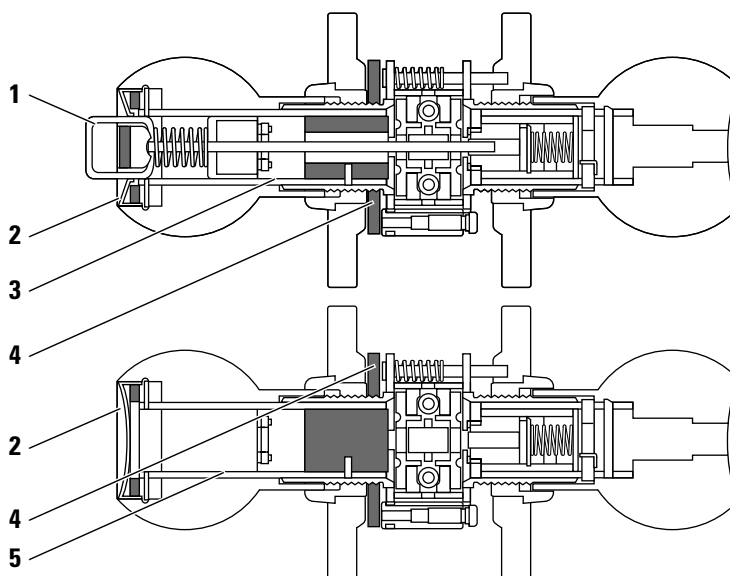


Figure 2.35 Cross-section of 8K locks showing lead-lined parts

Lead-lined parts list

Item	Description
1	Button assembly with shield
2	Knob with face shield
3	Inside knob sleeve with shield (for button knobs)
4	Rose shield
5	Inside knob sleeve with shield (for plain or keyed knobs)

Roses and
rose rings

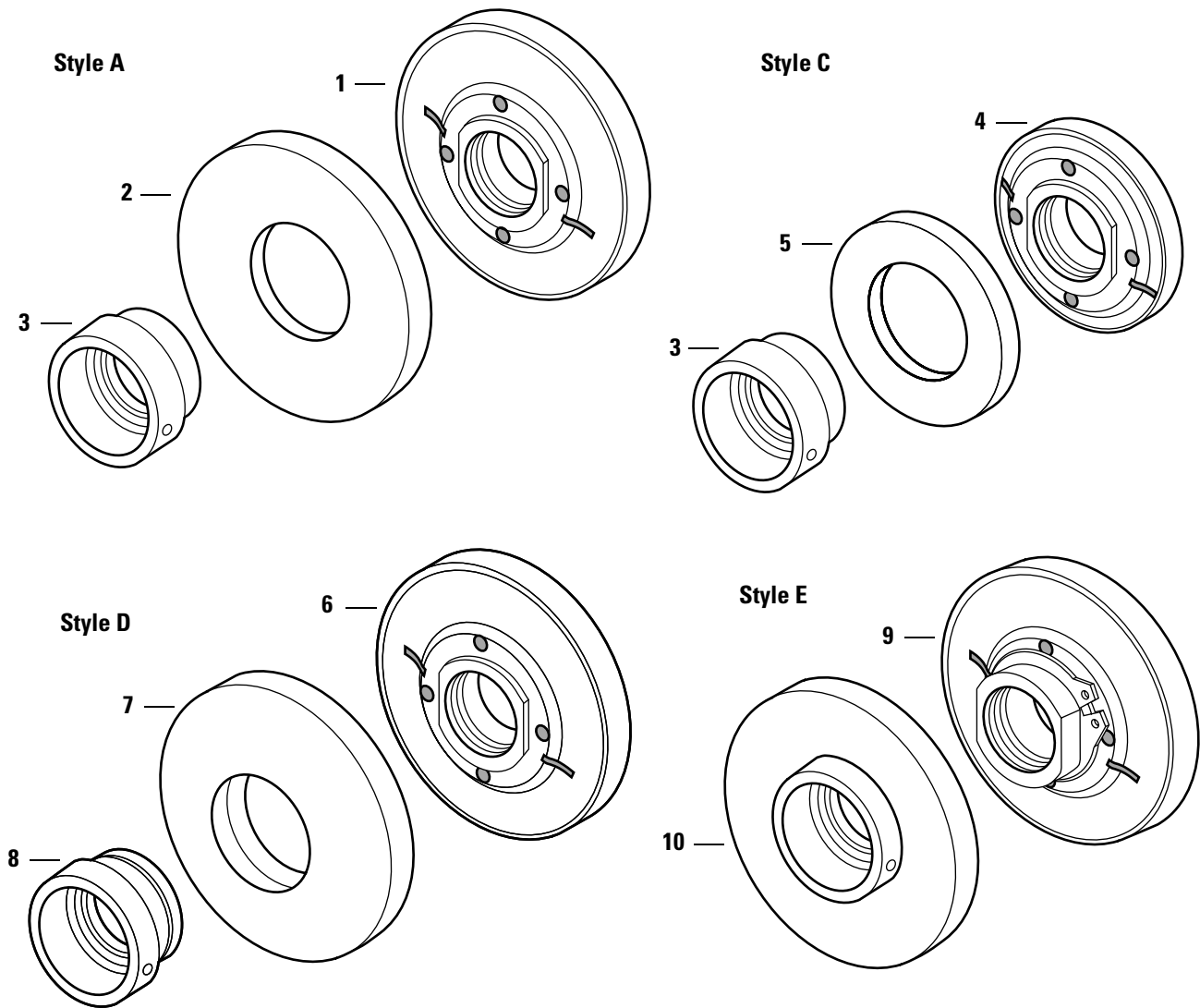


Figure 2.36 Roses and rose rings

Roses and rose rings parts list

Item	Style	Part no.	Qty.	Description
1	A	B54702	1	Outside rose assembly—large concave
2	A	B54700	1	Inside rose assembly—large concave
3	A & C	A54720	1	Inside rose ring—large concave
4	C	B54713	1	Outside rose assembly—small concave
5	C	B54712	1	Inside rose assembly—small concave
6	D	A54716	1	Outside rose assembly—small concave
7	D	B54715	1	Inside rose assembly—large convex
8	D	A54714	1	Inside rose ring—large convex
9	E	A54723	1	Outside rose assembly—thin door
10	E	A54722	1	Inside rose assembly—thin door

Knobs and components

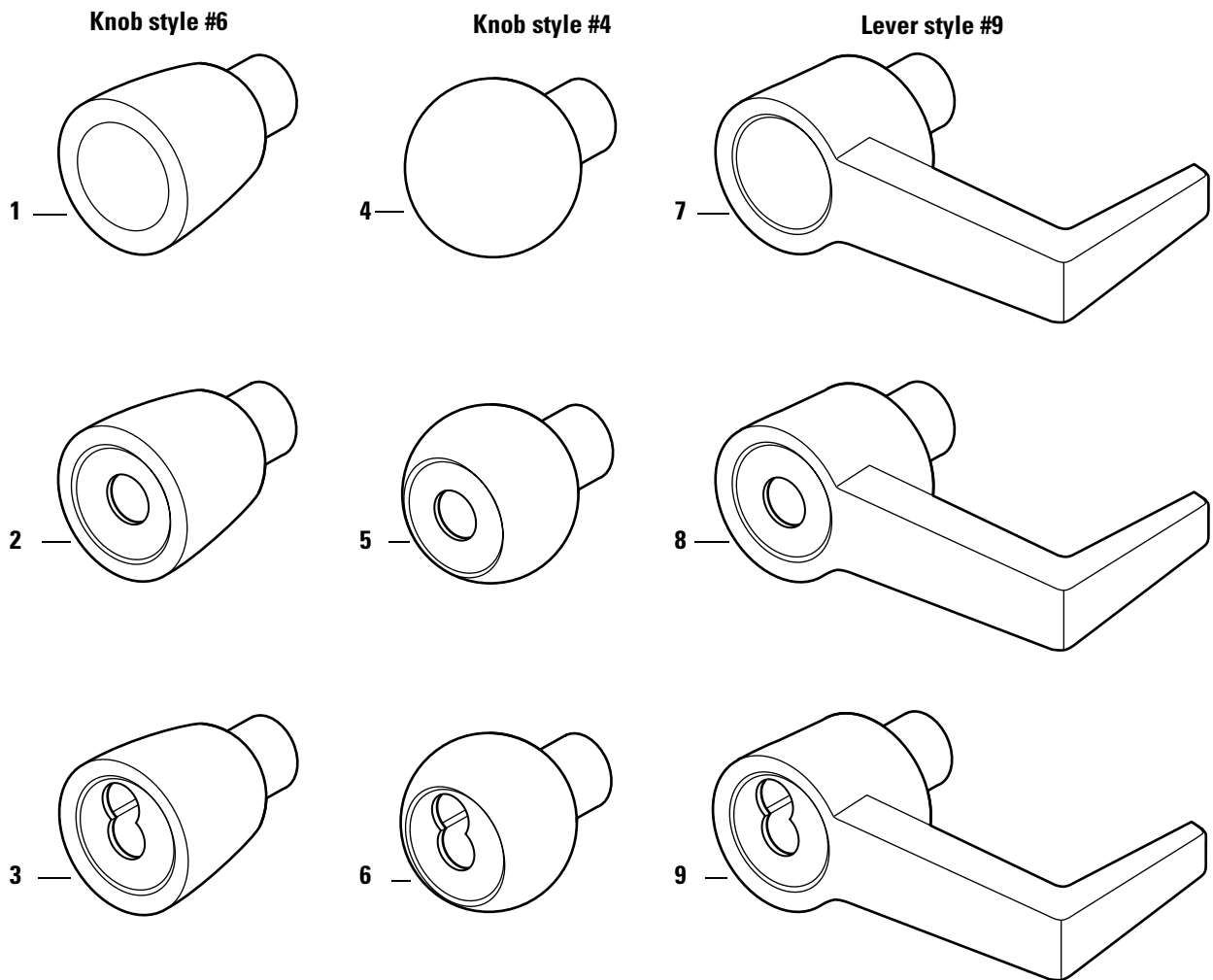


Figure 2.37 Knobs

Knobs parts list

Item	Style	Description	Standard	Tactile	Knurled
1	6	Plain tulip knob	B54705	N/A	B54756
2	6	Button tulip knob	B54706	N/A	B54757
3	6	Keyed tulip knob	B54703	N/A	B54755
4	4	Plain round knob	B54707	B54731	N/A
5	4	Button round knob	B54708	B54732	N/A
6	4	Keyed round knob	B54704	B54730	N/A
7	9	Plain lever handle	B54778	N/A	N/A
8	9	Button lever handle	B54779	N/A	N/A
9	9	Keyed lever handle	B54777	N/A	N/A

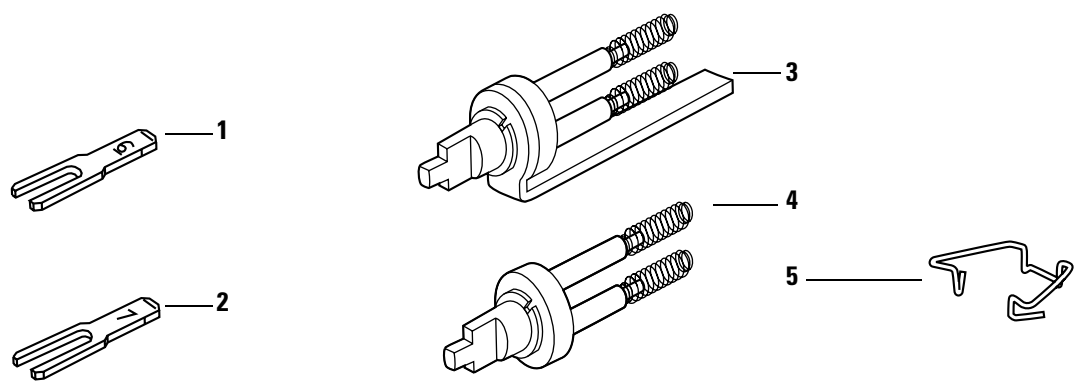


Figure 2.38 Knob components

Knob components parts list

Item	Part no.	Qty.	Description
1	B54210	1†	Six pin throw member‡
2	B54200	1†	Seven pin throw member‡
3	A54828	1	“H” throw member
4	A54829	1	“HJ” throw member
5	B54182	1	Knob keeper spring

† Single-keyed locks require one; double-keyed locks require two.

‡ For information about cores and keys, see the *Core and Key Service Manual* (T35527).

Knob projections from door

The following illustrates and lists the distance that the different knobs project from a door.

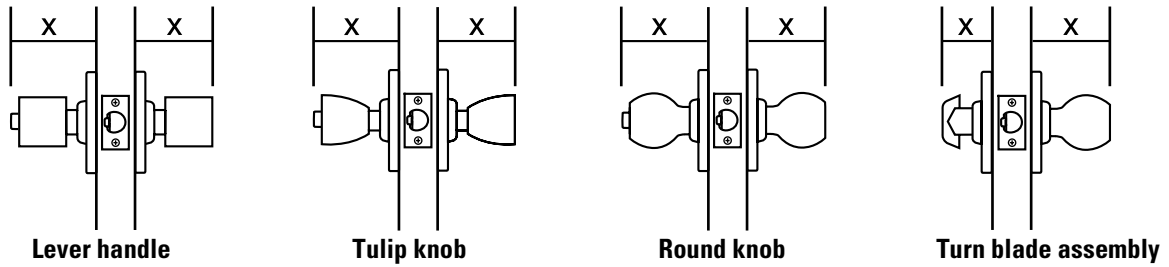


Figure 2.39 Knob projections

Knob projection table

Type	Style	Projection from door (x)
Plain lever handle	9	3"
Keyed lever handle		3"
Button lever handle		3 1/4"
Plain tulip knob	6	3"
Keyed tulip knob		3"
Button tulip knob		3 1/4"
Plain round knob	4	3"
Keyed round knob		3"
Button round knob		3 1/4"
Turn blade assembly		2"

Dummy trim

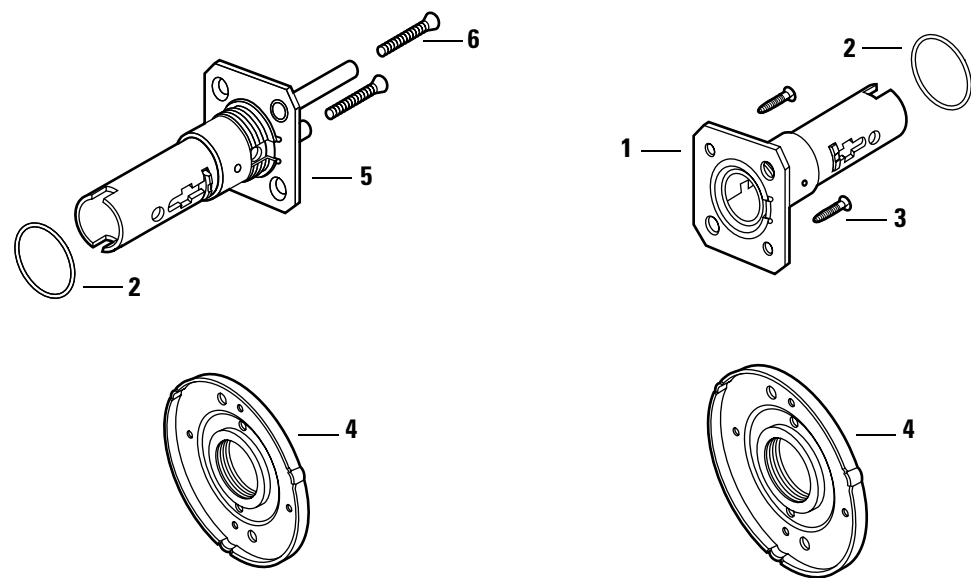
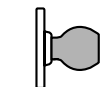


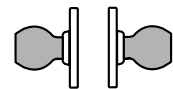
Figure 2.40 Dummy trim parts

Single dummy trim parts list



Item	Part No.	Qty.	Description
1	B54884	1	Chassis dummy trim assembly
2	A54465	1	“O” ring
3	A39217	2	#8 x 1 PFH type AB screw
4	B55051	1	Small liner and ring assembly <i>or</i>
	B55050	1	Large liner and ring assembly

Double dummy trim parts list



Item	Part No.	Qty.	Description
1	B54884	1	Chassis dummy trim assembly
2	A54465	2	“O” ring
4	B55051	2	Small liner and ring assembly <i>or</i>
	B55050	2	Large liner and ring assembly
5	B54885	1	Chassis dummy trim assembly
6	A18991	2	#8-32 x 1 1/8 Phil. FHMS screw

Latches

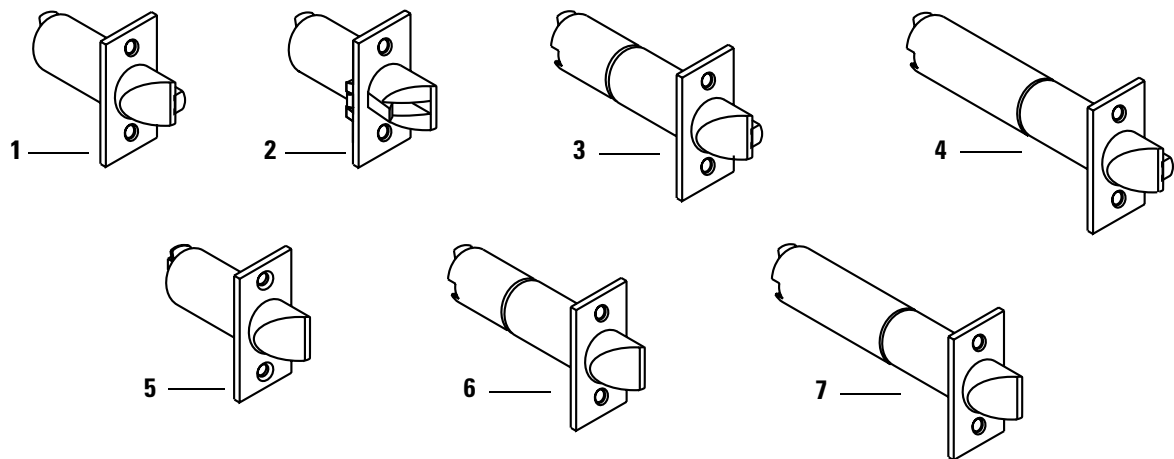


Figure 2.41 Latches

Latches parts list

Item	Latch type	Backset	Part no.	Nomen- clature	Description
1	Deadlocking	2 3/4"	C54680	8KL3 [†]	Latch
2	Deadlocking	2 3/4"	A54661	8KL3-3/4 [†]	Latch with 3/4" throw
3	Deadlocking	3 3/4"	C54682	8KL4 [†]	Latch
4	Deadlocking	5"	C54684	8KL5 [†]	Latch
5	Spring	2 3/4"	C54681	8KSL3 [†]	Latch
6	Spring	3 3/4"	C54683	8KSL4 [†]	Latch
7	Spring	5"	C54685	8KSL5 [†]	Latch

[†] Use the nomenclature to order the latch package, which includes the latch and two A25359 screws. Specify the finish you need when ordering.

Installation tools

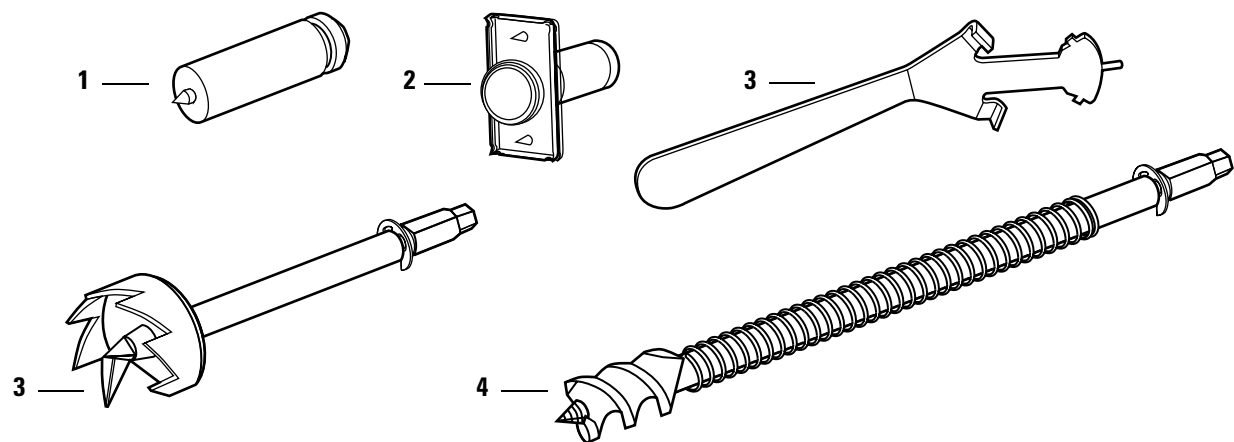


Figure 2.42 Installation tools

Installation tools parts list

Item	Nomen- clature	Part no.	Description
1	KD325	A01514	Strike plate locating pin
2	KD315	1350393	Faceplate marking chisel (1 1/8" x 2 1/4")
not shown	KD312	1487975	Faceplate marking chisel (1" x 2 1/4")
3	KD316	C54466	Spanner wrench
4	KD309	A54084	2 1/8" diameter chassis hole bit assembly†
5	KD318	A54085	1" diameter drill bit assembly†

† Use with the boring jig.

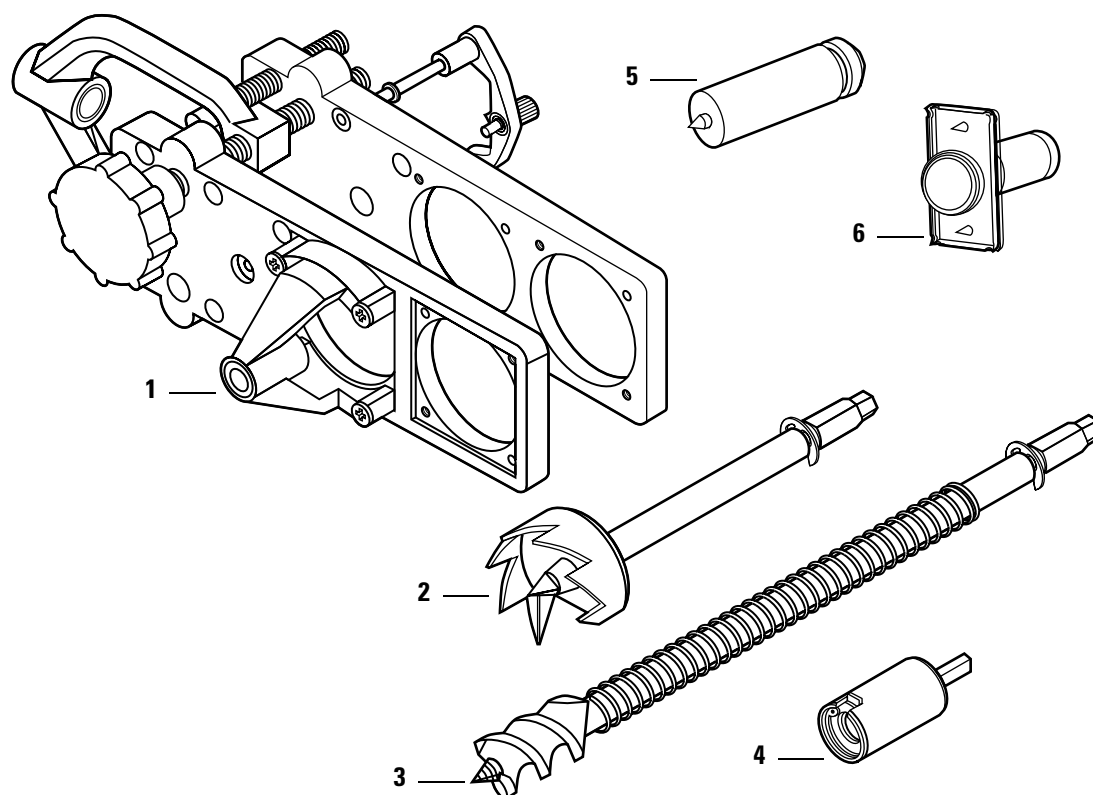


Figure 2.43 Boring jig kit

Boring jig kit parts list

Item	Nomen- clature	Part no.	Description
1	N/A	N/A	Boring jig [†]
2	KD309	A54084	2 1/8" diameter chassis hole bit assembly
3	KD318	A54085	1" diameter drill bit assembly
4	N/A	N/A	Adaptor for 3/8" drill chuck [†]
5	KD325	A01514	Strike plate locating pin
6	KD315	1350393	Faceplate marking chisel (1 1/8" x 2 1/4")
not shown	KD312	1487975	Faceplate marking chisel (1" x 2 1/4")
1-6	KD304A	N/A	Boring jig kit

[†] Can only be ordered as part of the KD304A boring jig kit.

3

SERVICE AND MAINTENANCE

This chapter contains instructions for replacing components, servicing and maintaining components, and troubleshooting common problems.

To	See page
Replace knobs	3-3
Replace the knob driver	3-6
Replace roses	3-7
Replace button assemblies	3-10
Replace the knob keeper spring	3-12
Replace the key release cam assembly	3-13
Replace the sleeve assembly	3-16
Lubricate cores	3-17
Align chassis and trim	3-18
Position the locking cam for C function locks	3-19
Position the locking cam for G function locks	3-20
Position the locking cam for R, S, & T function locks	3-21
Use the emergency key for H and HJ function locks	3-23
Troubleshoot common problems	3-24

MAINTENANCE TOOLS

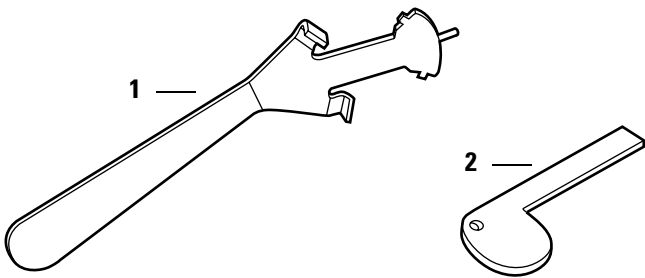


Figure 3.1 Maintenance tools

Maintenance tools parts list

Item	Nomen-clature	Part no.	Description
1	KD316	C54466	Spanner wrench
2		A25586	Emergency driver [†]

[†] For use with hotel function locks (H and HJ).

REPLACING PARTS

Replacing the knob

To remove the keyed knob:

1. Insert the control key into the core and rotate the key 15 degrees to the right.
2. Remove the core and throw member from the knob.
3. Insert a flat blade screwdriver into the figure-8 core hole and into the knob keeper.
4. Press the screwdriver blade in the direction of the arrow, as shown in [Figure 3.2](#).

Note: You will not be able to remove the knob if the screwdriver blade is inserted too far past the keeper.

5. Slide the knob off of the sleeve.

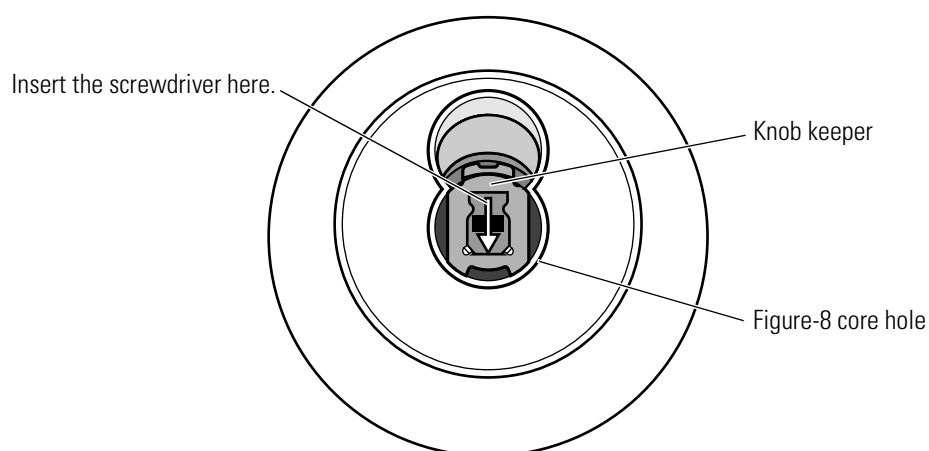


Figure 3.2 Removing the keyed knob

To remove the plain knob or button knob:

1. Insert the long protrusion on the spanner wrench into the hole on the shaft of the knob, as shown in [Figure 3.3](#).
2. Slide the knob off the sleeve.

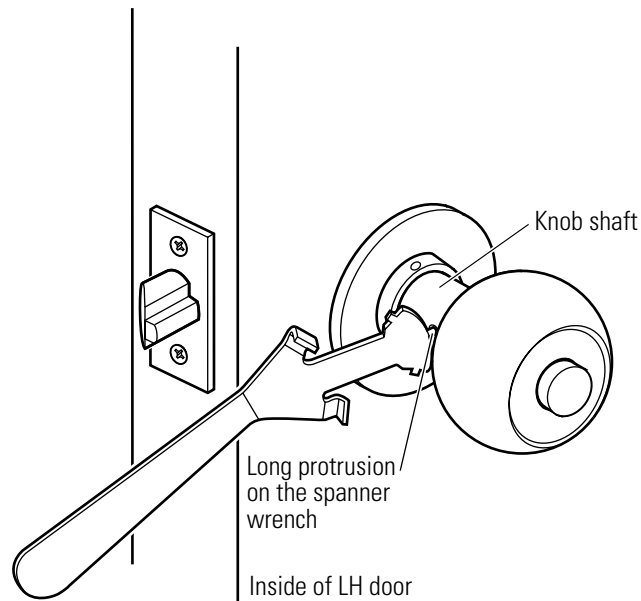


Figure 3.3 Removing the plain knob or button knob

To reinstall the knob:

1. Align the two drive lugs (plain or button knob) or notches (keyed knob) with the two slots in the sleeve, as shown in [Figure 3.4](#).
2. Slide the knob onto the sleeve and firmly push on the knob until it is seated.

3. Turn the knobs to check that they operate smoothly.

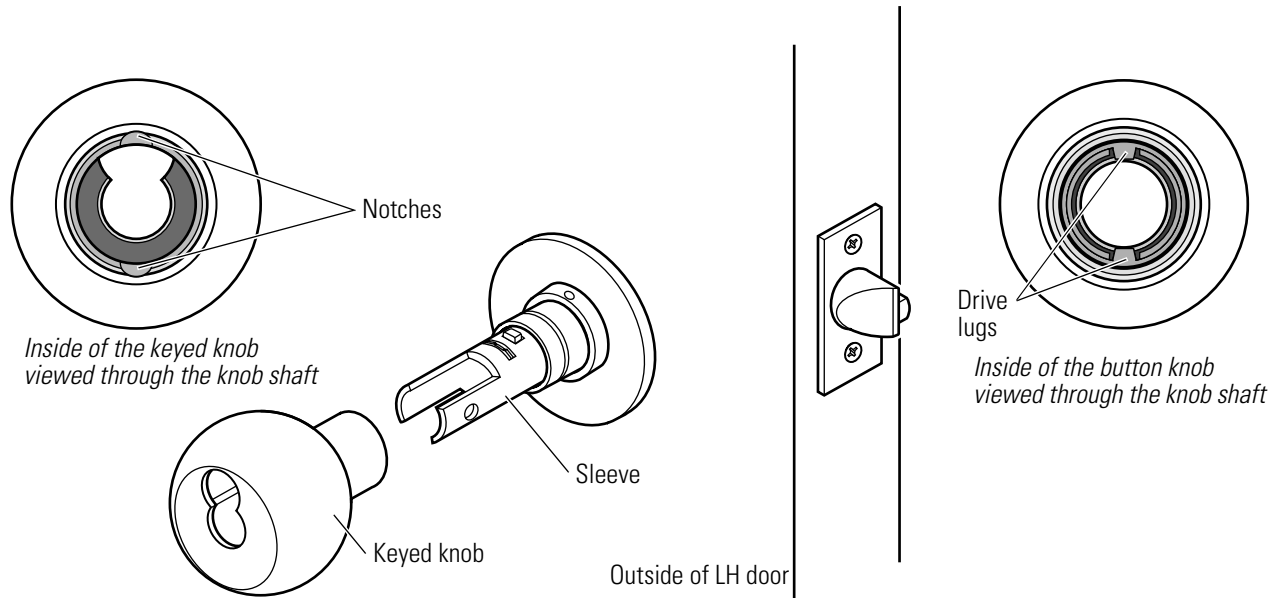


Figure 3.4 Reinstalling the knob

4. If the knob is keyed, insert the control key into the core and rotate the key 15 degrees to the right. Using the control key, insert the core and throw member into the knob. Rotate the control key 15 degrees to the left and remove the key.

Replacing the knob driver

Removing the knob driver

1. Remove the keyed knob ([page 3-3](#)).
2. Use a flat blade screwdriver to press down on the knob driver tab, which is visible through the cutout in the top of the sleeve, as shown in [Figure 3.5](#). The knob driver should fall out through the cutout in the bottom of the sleeve.

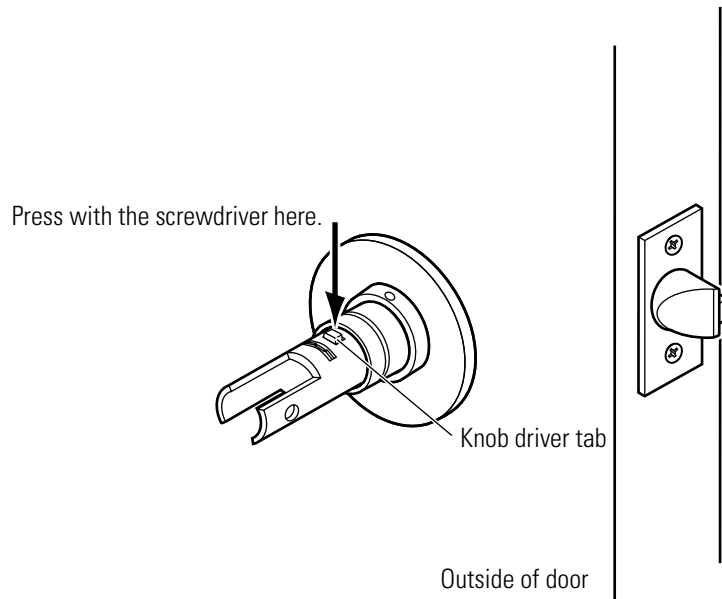


Figure 3.5 Removing the knob driver

Reinstalling the knob driver

1. Position the knob driver as shown in [Figure 3.6](#).
2. Insert the knob driver into the sleeve until it snaps into place. The knob driver tab should be visible through the cutout in the top of the sleeve.

3. Reinstall the keyed knob ([page 3-4](#)).

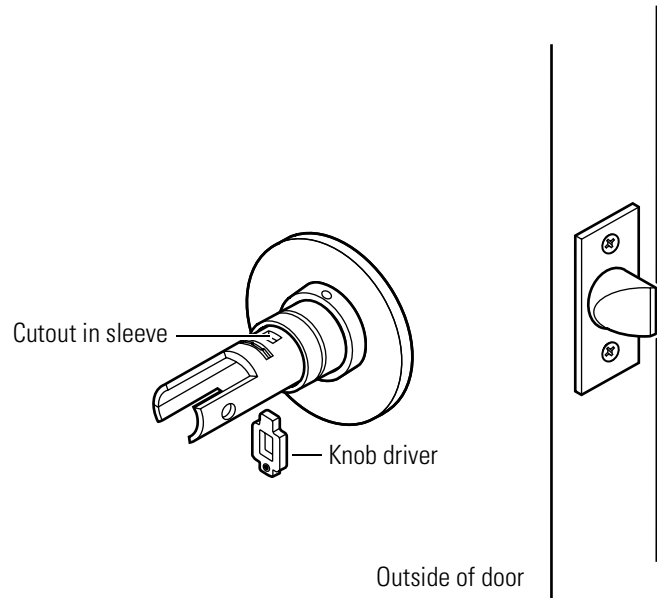


Figure 3.6 Reinstalling the knob driver

Replacing the inside rose assembly

To remove the inside rose assembly:

1. Remove the inside knob ([page 3-4](#)).
2. Insert the short protrusion on the spanner wrench into the hole on the rose ring and rotate it until you can remove the rose ring, as shown in [Figure 3.7](#).
3. Slide the rose assembly off of the sleeve.

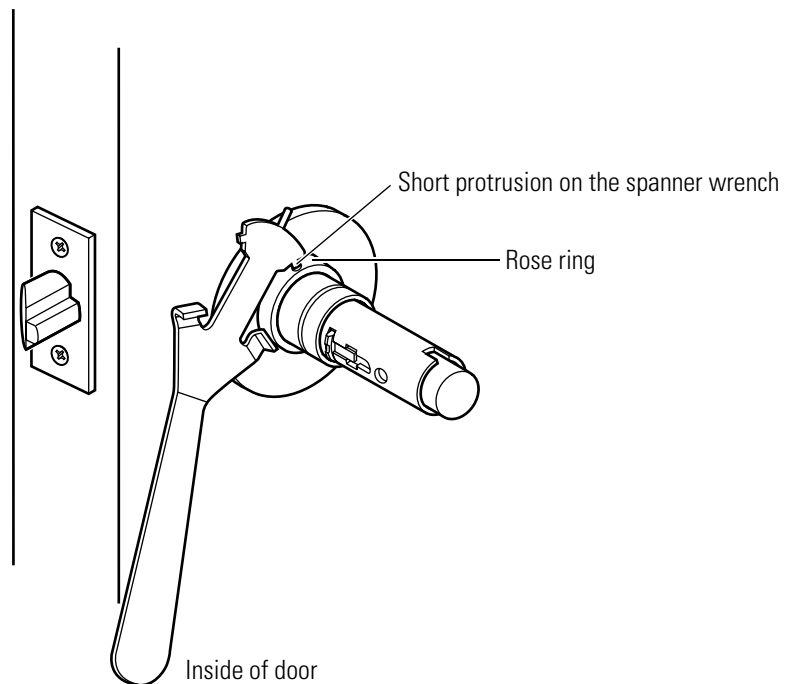


Figure 3.7 Removing the inside rose ring with the spanner wrench

To reinstall the inside rose assembly:

1. Slide the rose assembly onto the sleeve, as shown in [Figure 3.8](#).
2. Thread the rose ring onto the sleeve until the rose assembly is snug against the door.
3. Reinstall the knob ([page 3-4](#)).

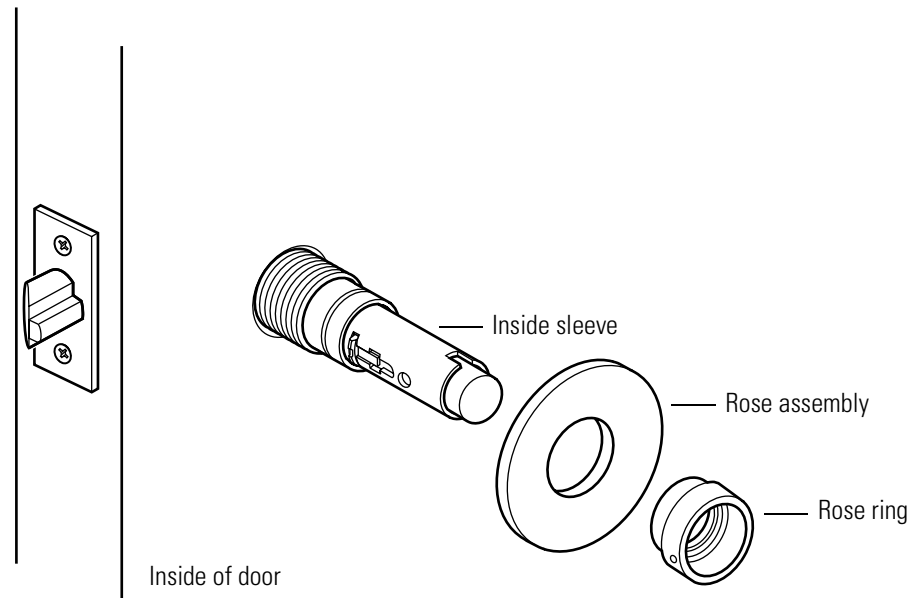


Figure 3.8 Reinstalling the inside rose assembly and rose ring

**Replacing the
outside rose
assembly**

To remove the outside rose assembly:

1. Remove the following components:
 - knobs ([page 3-3](#))
 - inside rose assembly ([page 3-7](#)).
2. Slide the chassis assembly out of the door.
3. Retract the rose locking pin, and rotate the rose assembly until it is free from the hub. See [Figure 3.9](#).

4. Remove the outside rose assembly from the sleeve.

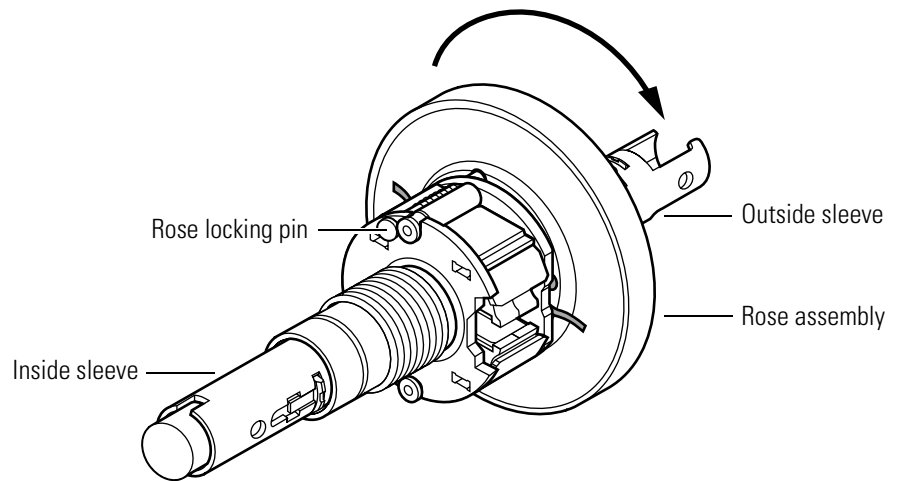


Figure 3.9 Removing the outside rose assembly

To reinstall the outside rose assembly:

1. Retract the rose locking pin. See [Figure 3.10](#). When reinstalling the chassis and rose assembly in the door, rotate the rose assembly until it is positioned so that the chassis is centered in the door and the rose assembly is flush against the door.
2. Release the rose locking pin into a groove in the rose liner. The pin should lock into the rose liner.

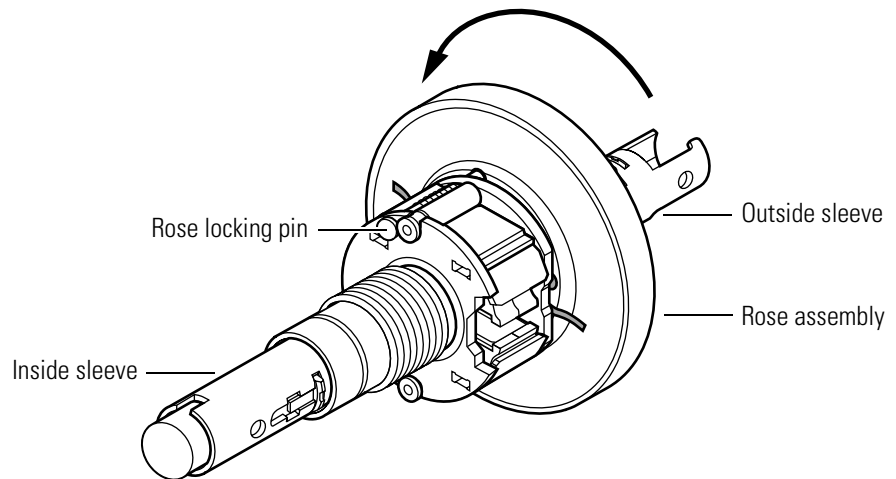


Figure 3.10 Reinstalling the outside rose assembly

3. Install the lock chassis assembly from the outside. Make sure the latch tabs engage the chassis frame and the latch tailpiece engages the retractor, as shown in [Figure 3.11](#).

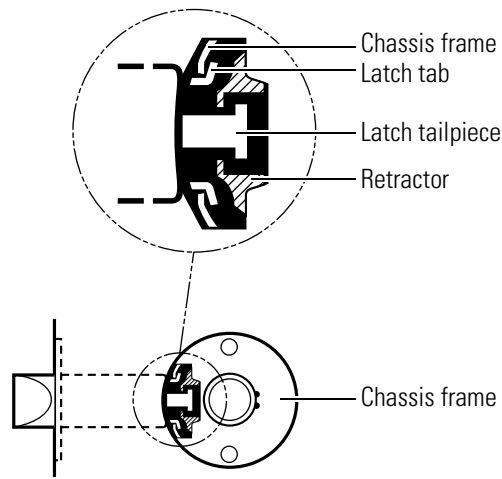


Figure 3.11 Engaging the retractor in the tailpiece

4. Reinstall the following components:
 - inside rose assembly ([page 3-8](#))
 - knobs ([page 3-4](#)).

Replacing the button assembly

To remove the button assembly:

Note: These instructions apply for all types of button assemblies.

1. Remove the following components:
 - knobs ([page 3-4](#))
 - inside rose assembly ([page 3-7](#))
 - outside rose assembly ([page 3-9](#)).
2. Use a flat screwdriver to press down on the button assembly tab, which is visible through the cutout in the sleeve, as shown in [Figure 3.12](#). The tab should now lie flat.

Note: When performing this step, it is best to position the lock on a flat surface so that the retractor faces upward.

3. Press down on the retractor and slide the button assembly out of the sleeve.

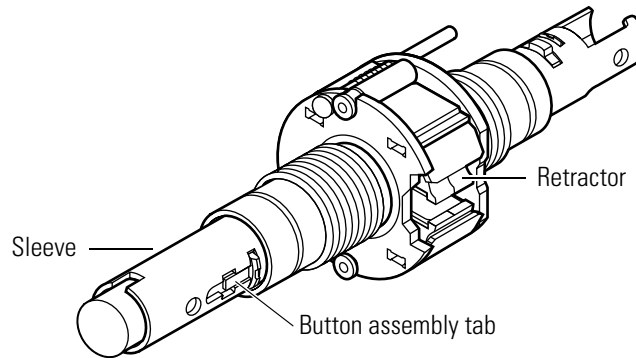


Figure 3.12 Removing the button assembly

To reinstall the button assembly:

1. Insert the new button assembly into the sleeve, as shown in [Figure 3.13](#), until the tab lines up with the cutout in the sleeve. It may be necessary to slightly press in the retractor with your thumb so that the locking bar can properly align itself through the chassis and into the key release cam assembly.

Note: The button assembly should not pop out of the sleeve. If it does, the assembly is misaligned and will not function properly.

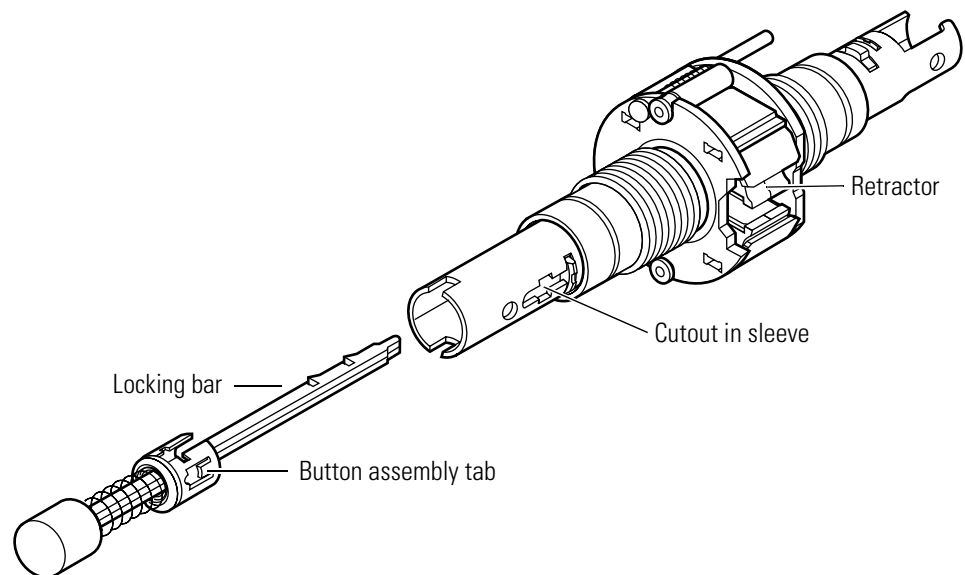


Figure 3.13 Inserting the button assembly into the sleeve

2. Insert a small screwdriver into the cutout in the sleeve and under the button assembly tab. Bend the tab into the cutout, as shown in [Figure 3.14](#).

Note: Do not bend the tab so that it protrudes further than the diameter of the sleeve. It could interfere with the knob function.

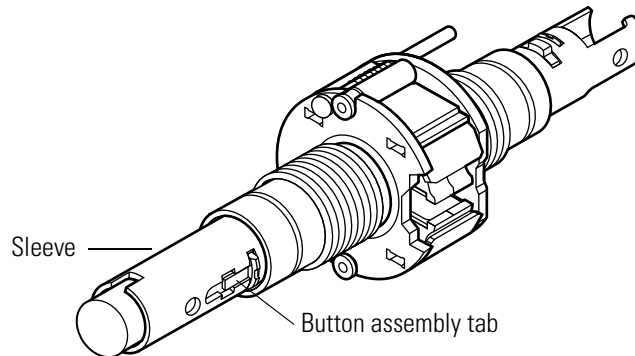


Figure 3.14 Bending the button assembly tab

3. Reinstall the following components:
 - outside rose assembly ([page 3-9](#))
 - inside rose assembly ([page 3-7](#))
 - knobs ([page 3-4](#)).

Replacing the knob keeper spring

To remove the knob keeper spring:

1. Remove the following components:
 - knobs ([page 3-4](#))
 - inside rose assembly ([page 3-7](#))
 - outside rose assembly ([page 3-8](#))
 - button assembly, if present ([page 3-10](#)).
2. Using a pair of needle-nosed pliers, reach into the sleeve and remove the knob keeper spring. See [Figure 3.15](#).

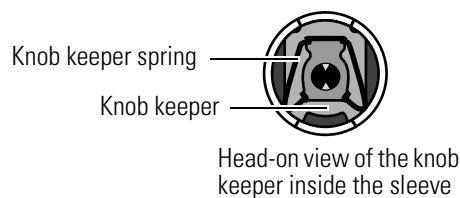
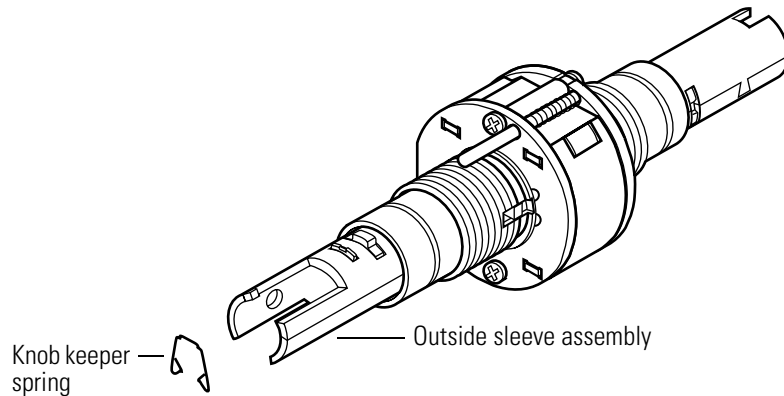


Figure 3.15 Removing the knob keeper spring

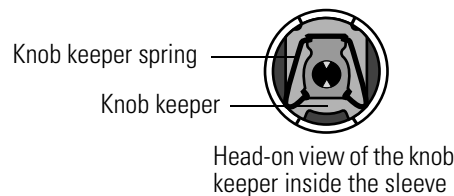
To reinstall the knob keeper spring:

1. Position the knob keeper spring as shown in [Figure 3.16](#).

**Figure 3.16** Positioning the knob keeper spring

2. Use a pair of needle-nosed pliers to insert the knob keeper spring into the sleeve. Using the pliers, work the spring into position so that the spring is gripping the knob keeper, as shown in [Figure 3.17](#).

Note: If the knob keeper spring is not installed correctly, the knob may fall off the chassis.

**Figure 3.17** Knob return spring in position

3. Reinstall the following components:
 - button assembly, if present ([page 3-11](#))
 - outside rose assembly ([page 3-9](#))
 - inside rose assembly ([page 3-7](#))
 - knobs ([page 3-4](#)).

Replacing the key release cam assembly**To remove the key release cam assembly:**

1. Remove the following components:
 - knobs ([page 3-4](#))
 - inside rose assembly ([page 3-7](#))
 - outside rose assembly ([page 3-8](#))
 - button assembly, if present ([page 3-10](#)).

2. Remove the two chassis screws shown in [Figure 3.18](#), and separate the hub and sleeve assembly from the rest of the chassis. Save the two screws.

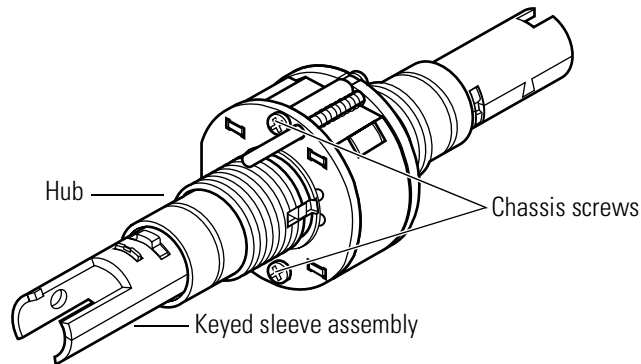


Figure 3.18 Separating the chassis

3. Rotate the ear on the key release cam 45 degrees and pull the key release cam assembly out of the sleeve, as shown in [Figure 3.19](#).

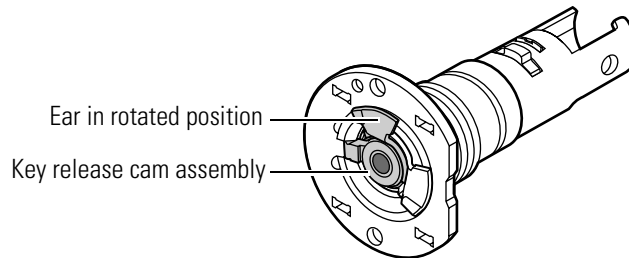


Figure 3.19 Removing the key release cam assembly

To reinstall the key release cam assembly:

1. Make sure that the deep slot in the sleeve lines up with the slot in the hub.
2. Insert the key release cam assembly into the sleeve so that the locking lug fits into the slot in the sleeve, as shown in [Figure 3.20](#).

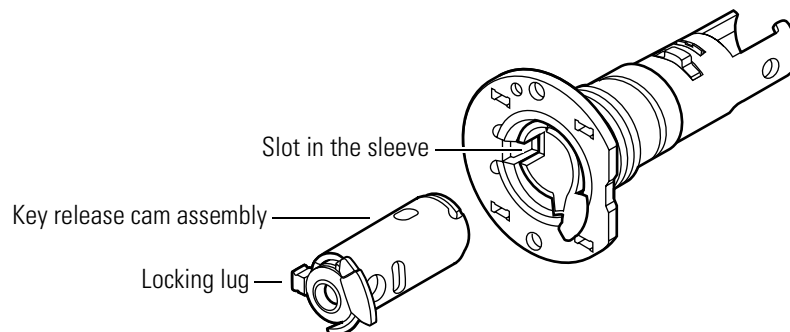


Figure 3.20 Reinstalling the key release cam assembly

3. Slide the chassis cover over the retractor assembly.
4. Align the open end of the retractor assembly with the ears on the key release cam assembly and sleeve in the inside hub assembly.
5. Press the retractor toward the retractor springs and insert the feet of the retractor assembly into the notches in the inside hub, as shown in [Figure 3.21](#).

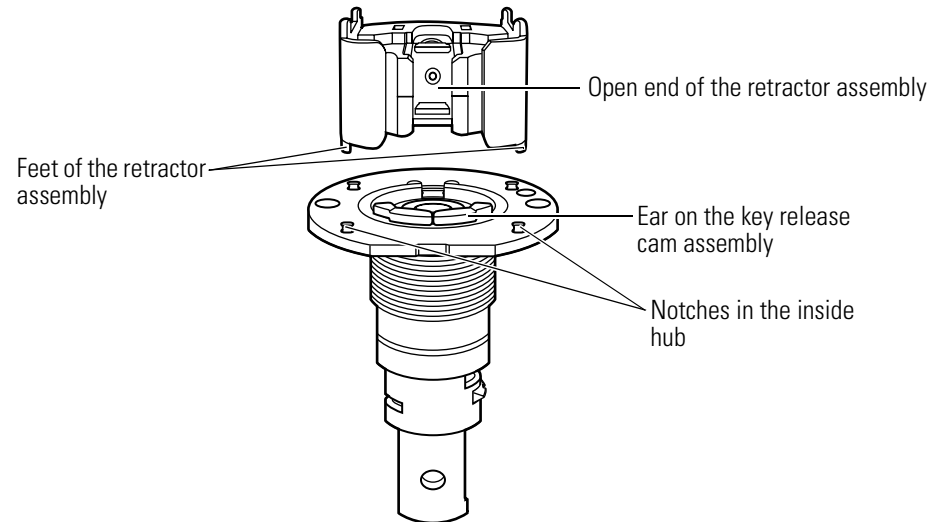


Figure 3.21 Positioning the retractor

6. Align the feet of the retractor assembly with the notches in the outside hub assembly, and the rose locking pin with the smaller of the two holes on the outside assembly, as shown in [Figure 3.22](#). Press the retractor toward the retractor springs and slide the two sections together.

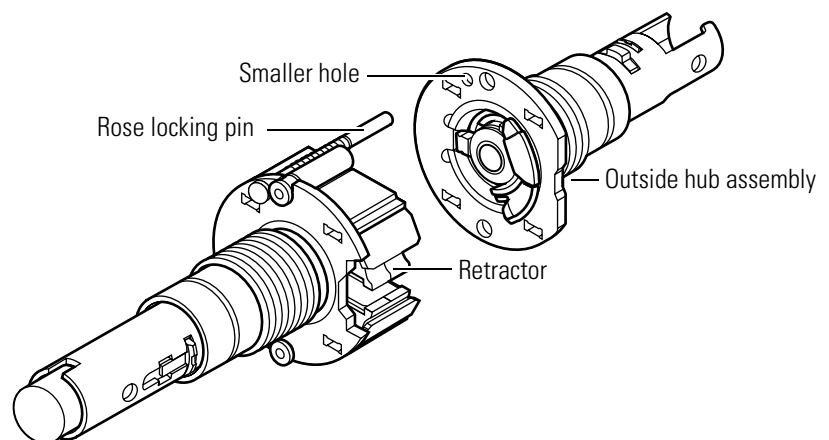


Figure 3.22 Reinstalling the retractor

7. Install the two chassis screws.

8. Reinstall the following components:
 - button assembly, if present ([page 3-11](#))
 - outside rose assembly ([page 3-9](#))
 - inside rose assembly ([page 3-7](#))
 - knobs ([page 3-3](#)).

Replacing the sleeve assembly

To remove the sleeve assembly:

1. Remove the following components:
 - knobs ([page 3-3](#))
 - knob driver of the sleeve you are replacing ([page 3-6](#))
 - inside rose assembly ([page 3-7](#))
 - outside rose assembly ([page 3-8](#))
 - button assembly, if present ([page 3-10](#))
 - key release cam assembly ([page 3-13](#)).
2. Position the sleeve as shown in [Figure 3.23](#). Push the sleeve through the hub as far as possible.
3. From the end of the sleeve that is opposite of the hub, insert a flat blade screwdriver through the sleeve and into the knob keeper.
4. Press the screwdriver blade in the direction of the arrow in [Figure 3.23](#). Push the sleeve through the hub, keeping the knob keeper pushed in until it clears the hub.

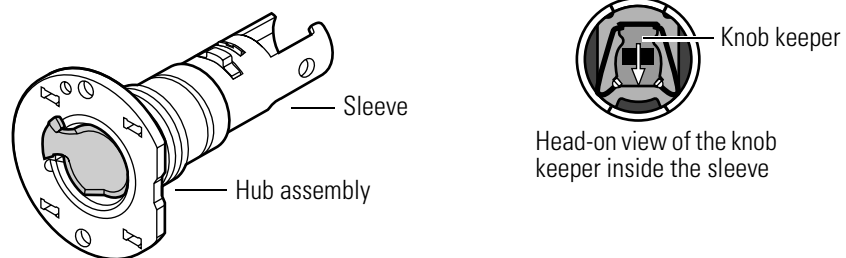


Figure 3.23 Removing and replacing the sleeve assembly

To reinstall the sleeve assembly:

1. Insert the sleeve through the hub as far as possible.
2. Insert a flat blade screwdriver through the sleeve and into the knob keeper.
3. Press the screwdriver blade in the direction of the arrow in [Figure 3.23](#). Push the sleeve the rest of the way through the hub.

4. Align the sleeve so that the deep slot in the sleeve lines up with the slot in the hub, as shown in [Figure 3.24](#).

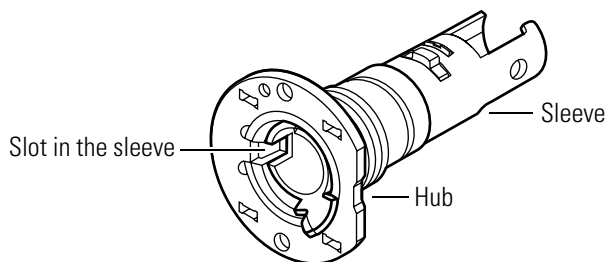


Figure 3.24 Positioning the sleeve

5. Reinstall the following components:
 - key release cam assembly ([page 3-14](#))
 - button assembly, if present ([page 3-11](#))
 - outside rose assembly ([page 3-9](#))
 - inside rose assembly ([page 3-7](#))
 - knobs ([page 3-4](#)).

LUBRICATING THE CORES



Caution

Do not lubricate cores with oil. Doing so will only attract dirt.

For powdered graphite lubrication:

1. Dip a key in graphite. Insert the key into the keyhole and remove it; repeat several times. *OR*
 Spray graphite into the keyhole. Insert the key into the keyhole and remove it; repeat several times.
2. Allow the graphite to sift into the pin segment holes.

For silicone type lubrication:

1. Clean all existing lubricant out of the core.



Caution

Do not mix graphite with a silicone-type lubricant.

2. With the core inverted, spray the lubricant into the key opening allowing the spray to penetrate the pin segment holes.

Note: When cores are installed and exposed to harsh weather conditions, silicone-type lubricants can help displace moisture as well as spread into pin segment holes and other surfaces.

ALIGNING THE CHASSIS AND TRIM

Establish a schedule to inspect locks, doors, and door hardware for proper alignment and operation. Occasionally a lock chassis and/or rose trim may become loose and require tightening.

To retighten a loose or misaligned chassis or rose trim:

1. Remove the inside trim. Instructions begin on [page 3-3](#).
2. Align the chassis with the latch. Make sure that the latch tabs engage the chassis frame and the latch tailpiece engages the retractor, as shown in [Figure 3.25](#).

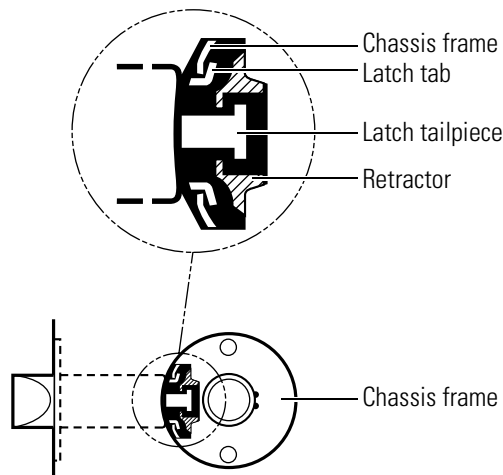


Figure 3.25 Engaging the retractor in the latch

3. Tighten the chassis screws.
4. Test the knob operation to make sure that the latch tailpiece does not bind with the chassis retractor.
5. Reinstall the inside trim. Instructions begin on [page 3-3](#).

CAM POSITIONING INSTRUCTIONS

Positioning the cam for C function locks

Vibration during the shipment of the C function locks may cause the inside locking cam to rotate out of position. It is possible to insert the core and throw member in this incorrect position, but faulty operation will result. You might notice this problem in one of the following ways.

- The inside key does not rotate the full 360 degrees and the outside key does not rotate the full 135 degrees. Remove the inside core and throw member, and perform the steps below to reposition the inside locking cam.
- Before you install the core and throw member, you can see that the inside locking cam is not positioned as shown in [Figure 3.26](#). Perform the following steps to reposition the inside locking cam.

To reposition the locking cam:

1. Be sure the inside knob locking cam, which engages the throw member, is rotated. Looking into the figure-8 core hole in the inside knob, turn the locking cam ears to match the position shown in [Figure 3.26](#).

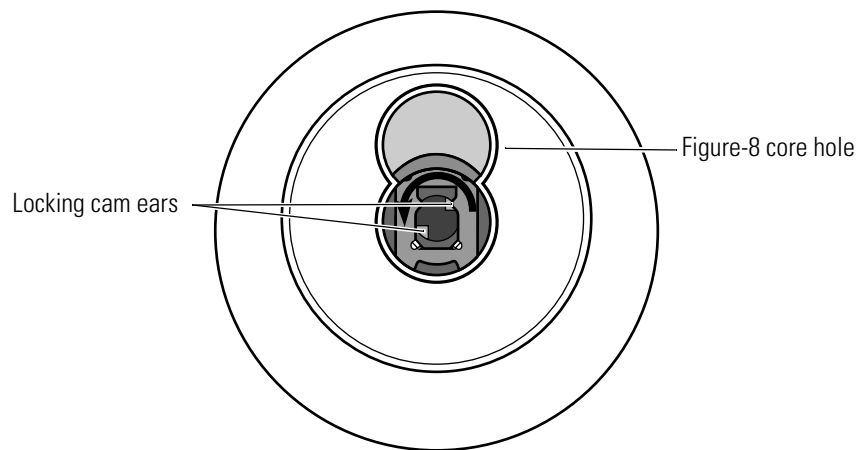


Figure 3.26 Correct position of the C function inside locking cam

2. With the lock in the locked position, install the core and throw member.
3. Check the operation of the knobs while the door is open. The outside knob is locked by rotating the inside key 360 degrees clockwise and unlocked by rotating the inside key 360 degrees counterclockwise.

Positioning the cam for G function locks

Vibration during the shipment of the G function locks may cause the inside locking cam to rotate out of position. It is possible to insert the core and throw member in this incorrect position, but faulty operation will result. You might notice this problem in one of the following ways.

- With the knobs in the locked position, both the inside and outside keys do not rotate one full turn in both directions. Remove both cores and throw members, and perform the following steps to reposition the locking cam.
- Before you install the core and throw member, you can see that the locking cam is not positioned as shown in [Figure 3.27](#). Perform the following steps to reposition the locking cam.

To reposition the locking cam:

1. Looking through the figure-8 core hole in either knob, turn the locking cam drive slot to match the position shown in [Figure 3.27](#).

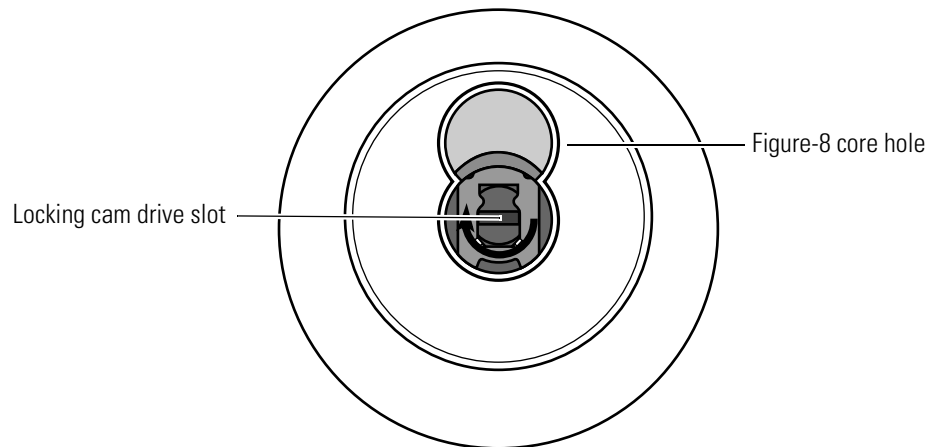


Figure 3.27 Correct position of the G function locking cam

2. With the lock in the locked position, install that knob's core and throw member.

3. Looking into the figure-8 core hole in the other knob, turn the locking cam drive slot until it stops, as shown in [Figure 3.28](#).

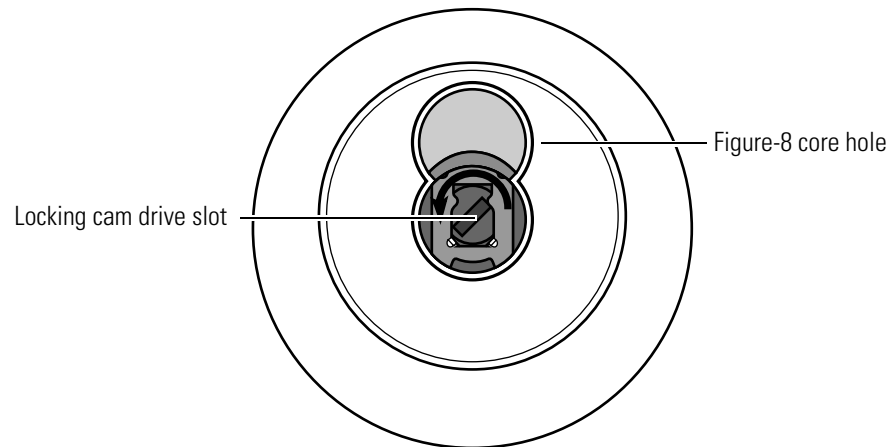


Figure 3.28 Intermediate position of the G function locking cam

4. Turn the drive slot clockwise to match the position shown in [Figure 3.27](#).
5. Reinstall that knob's core and throw member.
6. Check the operation of the knobs while the door is open. The knobs are locked by rotating the key $1\frac{1}{4}$ turns counterclockwise and unlocked by rotating the key $1\frac{1}{4}$ turns clockwise.

Positioning the cam for R, S, & T function locks

Vibration during the shipment of the R, S, & T function locks may cause the locking cam to rotate out of position. It is possible to insert the core and throw member in this incorrect position, but the lock will not function properly. You might notice this problem in one of the following ways.

- The inside key does not rotate the full 360 degrees and/or the outside key does not rotate the full 135 degrees. Remove the core and throw member, and perform the steps below to reposition the inside locking cam.
- Before you install the core and throw member, you can see that the locking cam is not positioned as shown in [Figure 3.29](#). Perform the following steps to reposition the locking cam.

To reposition the locking cam:

1. Be sure the locking cam, which engages the throw member, is rotated counterclockwise. Looking into the figure-8 core hole in the knob, turn the locking cam ears counterclockwise to match the position shown in [Figure 3.29](#).

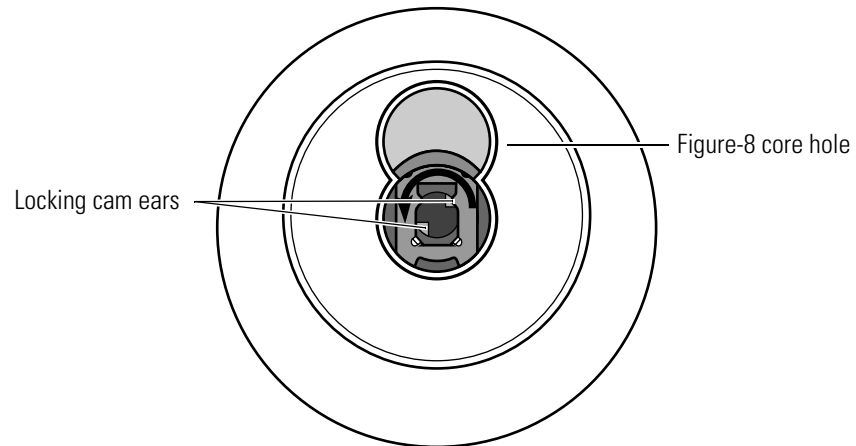


Figure 3.29 Correct position of the R, S, & T function locking cam

2. With the lock in the locked position, install the core and throw member.

For the S function, repeat Steps 1 and 2 for the other side of the lock. For the R and T functions, go to Step 3.
3. Check the operation of the knobs while the door is open. The knob is locked by rotating the key 360 degrees counterclockwise and unlocked by rotating the key 360 degrees clockwise.

Note: For T function locks, when the outside knob is locked by the key, the knob remains locked even though the push button is released from turning the inside knob or closing the door.

EMERGENCY KEY INSTRUCTIONS FOR H AND HJ FUNCTION LOCKS

To use the emergency key:

1. Remove the core and throw member ([page 3-3](#)).
2. Insert the blade of the emergency key into the slot of the figure-8 core hole, as shown in [Figure 3.30](#).

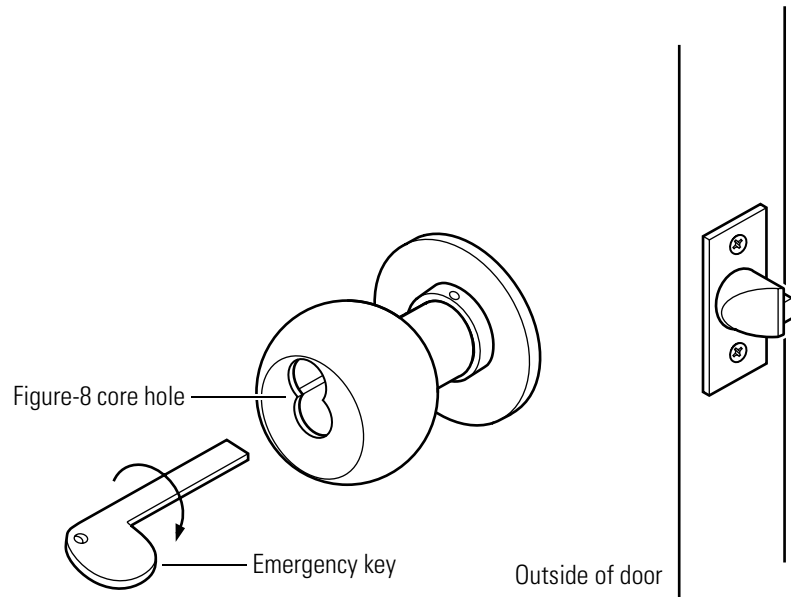


Figure 3.30 Inserting the emergency key

3. Turn the key and retract the latch.

TROUBLESHOOTING

This table summarizes the possible causes for certain lock problems. The causes are listed in the order of likelihood. (The most likely cause is first, and so forth.)

You notice...	Possible causes include...	You should...
Knob won't return to its normal position.	There is binding between the knob and rose.	Ensure that the lock chassis is centered within the door (pg. 3-18).
Key spins freely, but won't retract the latch or unlock the door.	a. Throw member is not installed. b. 6-pin core is installed with a 7-pin throw member. c. Knob driver is not installed.	a. Install the throw member. b. Change the core or throw member. c. Install the knob driver (pg. 3-6).
Core doesn't fit into the knob core hole.	a. 7-pin core is installed with a 6-pin throw member. b. Keyed knob is defective.	a. Change the core or throw member. b. Replace the keyed knob (pg. 3-4).
Button doesn't pop out as expected.	Button shaft is damaged or bent.	Replace the button assembly (pg. 3-10).
Latch doesn't retract.	a. Latch tailpiece is broken. b. Latch tailpiece didn't engage the retractor correctly during installation.	a. Replace the latch assembly. b. Reinstall the lock chassis (pg. 3-18).
For a C function lock, the inside key does not rotate the full 360°, and the inside key doesn't rotate the full 135°.	Inside locking cam is out of position.	Reposition the inside locking cam (pg. 3-19).
For a G function lock with knobs in the locked position, the key doesn't rotate one full turn in both directions.	Locking cam is out of position.	Reposition the locking cam (pg. 3-20).
For R, S, and T function locks, the key doesn't rotate one full turn in both directions.	Locking cam is out of position.	Reposition the locking cam (pg. 3-21).
Cannot remove the operating key from an H or HJ function lock.	Key is turned 180 degrees past the correct position.	Push the inside button, turn the key back 180°, and remove the key.

A

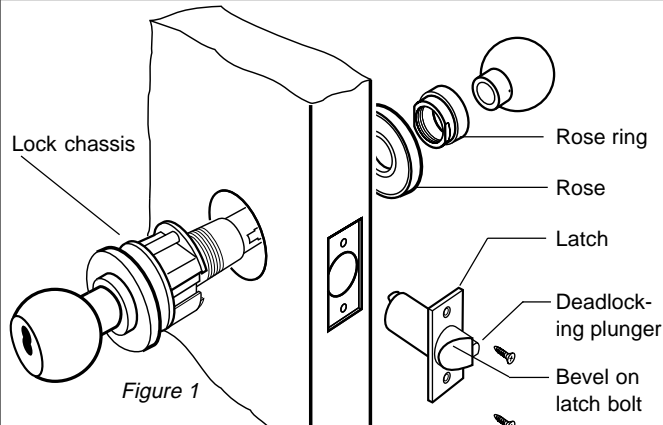
INSTALLATION INSTRUCTIONS

The following pages contain the *Installation Instructions for 8K Cylindrical Locks*.



Installation Instructions for 8K Cylindrical Locks

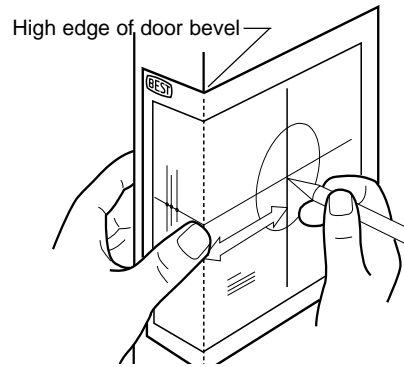
For factory prepared doors only



1. Install the latch so that the bevel on the latch bolt faces the strike lip.
2. Adjust the outside rose so that the chassis is centered in the door. Install the chassis from the outside of the door.
3. Install the inside rose, rose ring, knob, and strike plate.

Note: For detailed installation instructions, see the following steps.

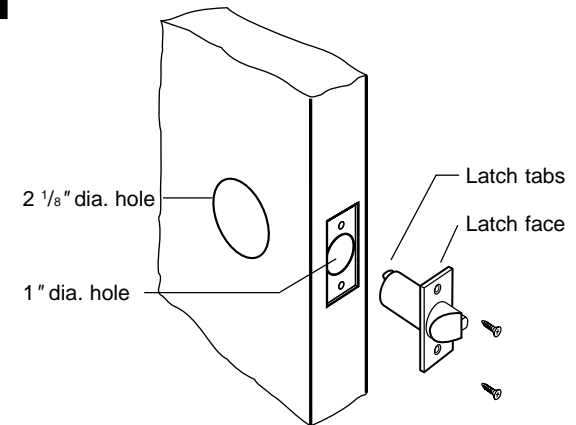
1 Position template



1. Fold the template and place it in position on the high edge of the door bevel.
2. Mark the drill points.

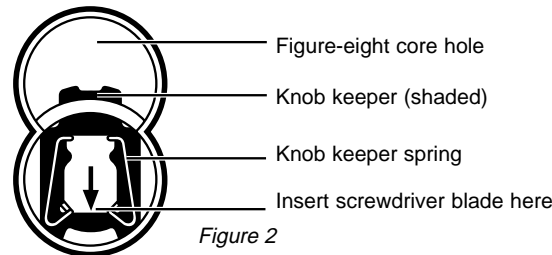
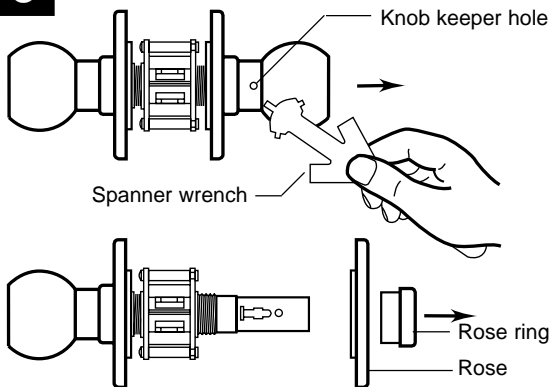
Note: Suggested height from floor to centerline of the lock is 40 5/16". If steel frames are used, the latch centerline must be in line with the center of the strike preparation.

2 Bore two holes and install latch



1. Bore a 2 1/8" diameter hole from both sides of the door, to the center of the door.
2. Drill a 1" diameter hole from the edge of the door that intersects the 2 1/8" hole.
3. Mortise the door edge for the latch face.
4. Install the latch and check the door swing. Latch tabs should project into the 2 1/8" diameter hole. See Step 5.

3 Remove inside knob and trim



For keyed inside knobs:

1. Remove the core and throw member (if not already removed). For instructions on removing the core, see Step 9 on the reverse side.
2. Insert a screwdriver into the figure-eight core hole and into the keeper (see figure 2).
3. Using the edge of the screwdriver, press down on the keeper and slide the keyed knob off of the sleeve.

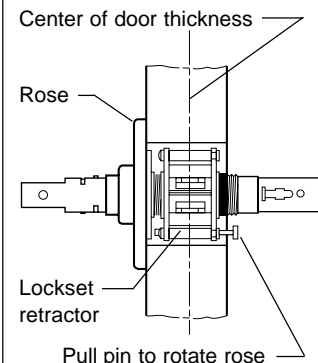
Caution: You will not be able to remove the knob if you put the screwdriver blade too far past the keeper.

4. Unthread the rose ring and remove the rose.

For inside knobs with button or blank face:

1. Insert the spanner wrench tip into the knob keeper hole and depress the keeper.
2. Slide the knob off.
3. Unthread the rose ring and remove the rose.

4 Center lockset in door



Check to see if the lockset retractor is centered in the door.

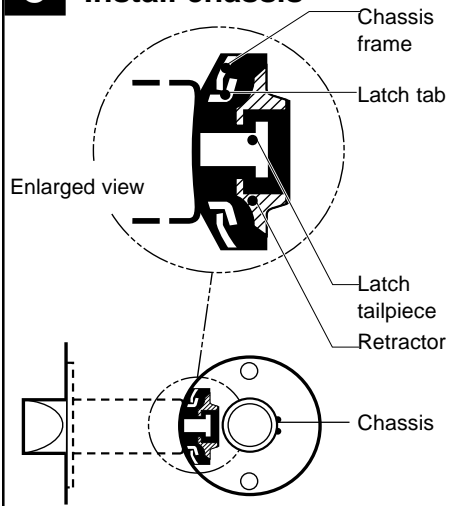
- If centered, proceed to the next numbered section on the reverse side.
- If not centered, use the door as a reference and center the retractor in the door. Do this by pulling the rose locking pin and rotating the outside rose in or out.

Caution: Center the retractor before proceeding to Step 5.

Note 1: Make sure the locking pin locks into the rose liner.

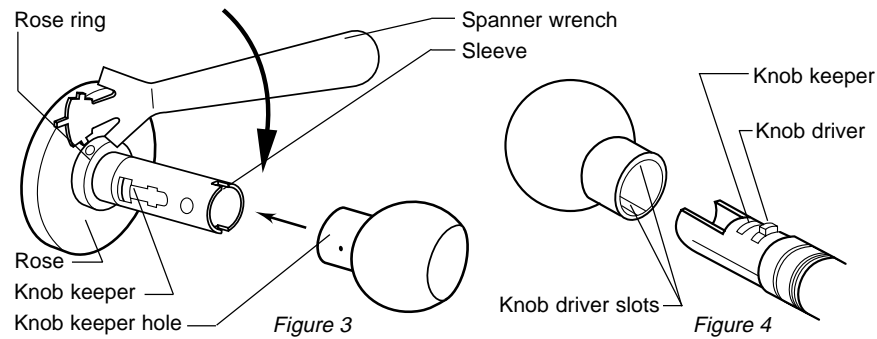
Note 2: Locksets with standard trim will fit doors 1 3/8" to 2 1/8" thick. Locksets with 'E' trim will fit doors 2 1/4" to 3" thick.

5 Install chassis



- After the retractor has been centered, and with the latch in place, install the chassis from the outside of the door. Make sure the latch tabs fit into the chassis frame and the latch tailpiece fits into the retractor.

6 Install inside rose and knob



Note: For lead lined locksets, slide the lead shield (not shown) over the sleeve and into the 2 1/8" hole.

- Slide the rose over the sleeve, then thread the rose ring onto the threaded hub and tighten snugly with the spanner wrench.

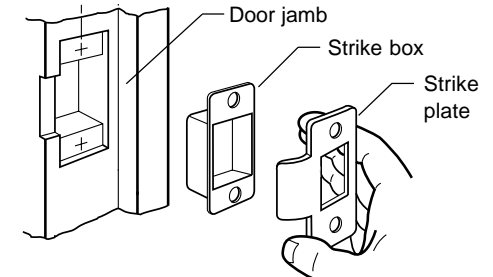
For non-keyed inside knobs:

- Align the knob keeper hole with the knob keeper in the sleeve (see figure 3). Firmly push the knob on until seated.

For keyed inside knobs:

- Align either of the knob driver slots with the knob driver in the sleeve (see figure 4). Firmly push the knob on until seated.

7 Install strike plate

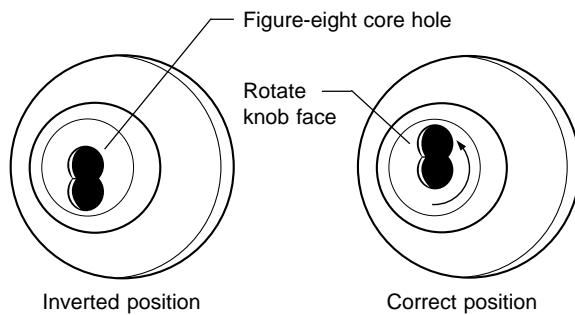


- Mortise the door jamb to fit the strike box and strike plate. Make sure to align the strike plate and latch bolt centers.

Caution: The deadlocking plunger of the latch bolt must not enter the strike plate. The plunger deadlocks the latch bolt and prevents forcing the latch when the door is closed. Excessive gap may reduce security and/or cause malfunction of the latch bolt assembly. A maximum door gap of 1/8" is recommended.

- Insert the strike box and secure the strike plate with the screws provided.

8 Check handing

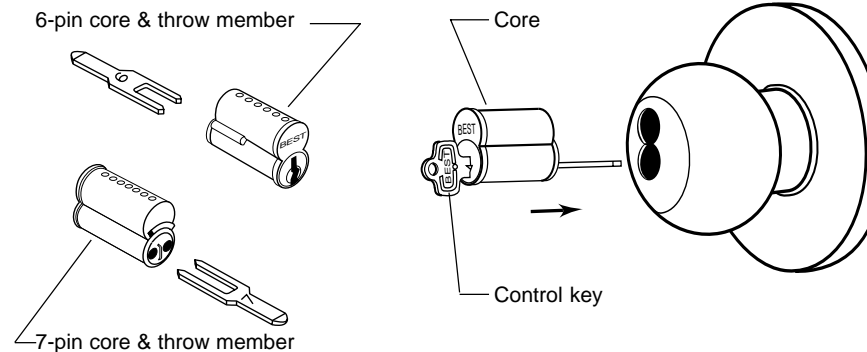


Note: When Best 8K locksets are properly installed, the figure-eight hole must be in the upper half of the knob. If it is not, change the hand of the lock.

To change the hand of the lock:

- Rotate the knob face 180° so that the figure-eight is in the upper half of the knob.

9 Install core



- Insert the proper throw member into the core. Six pin cores require the number '6' throw member; seven pin cores require the number '7' throw member.
- Insert the control key into the core and turn the key 15° clockwise.
- Insert the core and throw member into the knob with the control key.
- Rotate the key 15° counterclockwise and remove the key.

Note: To remove the core reverse this procedure.

Door reinforcement caution

If you use fabricated hollow metal doors, decide whether the doors are reinforced enough to support the lock. If the door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement.

Patents

Products are covered by one or more of the following patents: U.S. Patents:

D290085, 4843852, 4262507, 4318558, 4428212, 4496178, 4428570, 4437695, 4779908, 5116170,

Canadian Patents:

1229358, 1184774, 1194057

Other patents pending.

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